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MANAGEMENT METHODS

Vol. 9 No 4

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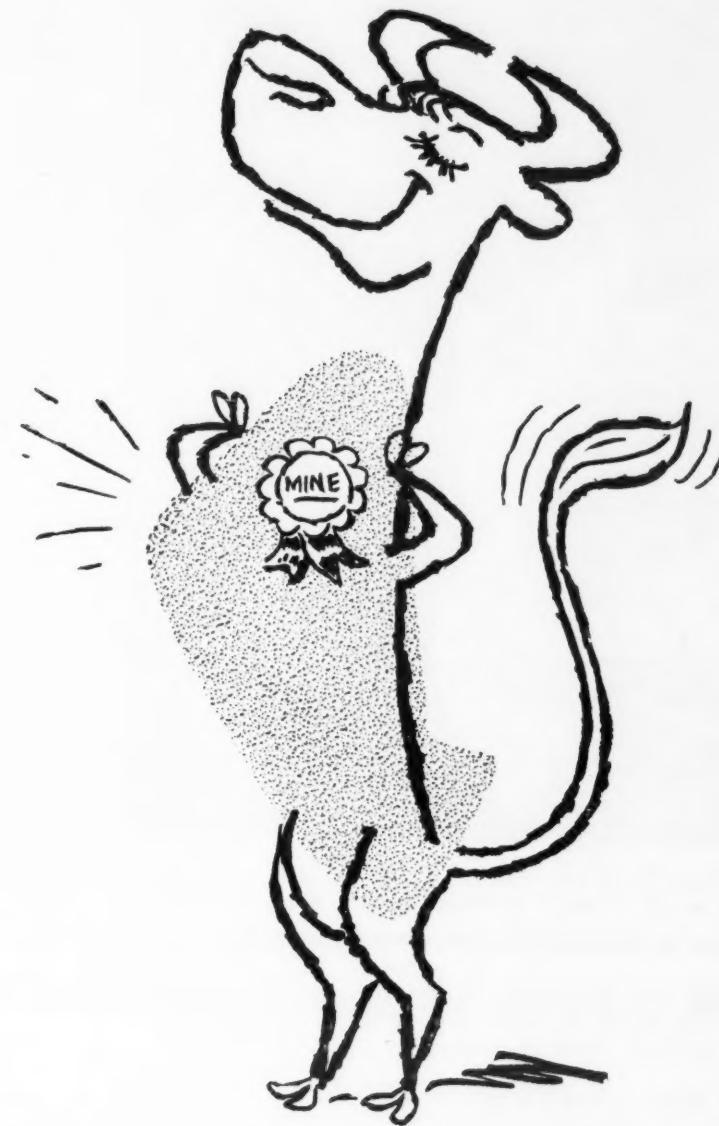
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Cover Photo: A session at one of the management courses in communication which is sponsored by the American Management Association.



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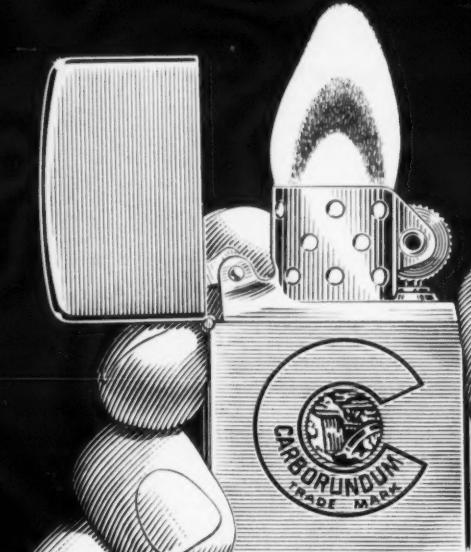
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consensus

ELECTRONIC BRIEFS WORTH REPEATING

Automatic controls for operations and quality

A new high-speed electronic system logs a plant's operating data and adds it up at the day's end, meanwhile keeping a robot eye on quality. The new electronic data integrating system (EDIS) was designed by the Minneapolis-Honeywell Regulator Company's Industrial Division engineers for Esso Standard Oil Company's Bayway (N.J.) refinery. It is believed to be the first such system that incorporates computing and quality evaluation with conventional automatic data-handling operations.

The new system, the result of nine months' research and engineering work, is considered relatively low-cost, ranging in price from \$10,000 to \$50,000. It was styled by Henry Dreyfus, well-known industrial engineer.

At Bayway, the new system will handle data gathering for production of a commercial solvent, automatically logging such operating data as temperature, pressure, flow, power consumption, and product quality. It will store up running figures for flow and power used, and add these up at the end of the day—the computation being done electronically. It also electronically computes the day's average temperature for a number of critical points. This is especially important in analyzing the flow and the overall operation.

All data, translated into numbers, is fed automatically to electric typewriters. The flow and power measurements are also punched on tape for later use in cost accounting operations. When not actually recording, the system monitors a number of critical points, keeping

track of conditions, and picking up any deviations as they arise. These are immediately spotted on an "announcer's panel" located at the operator's desk.

Quality, in this case, purity of the solvent, is measured by converting the desired quality into an electrical signal. This is constantly picked up on recording machines; if it slips below the desired characteristics, an alarm sounds. The system was designed to supplement—not supplant—the regular operators. By centralizing all current operating data at one point, it minimizes the strain on the operators who otherwise would have to manually collect data from many different locations.

Centralized billing from decentralized branch offices

To take full advantage of this electronic computer in its decentralized operations, Nationwide Insurance will use a new communications system to transmit punched card data back and forth between its Columbus headquarters and each of the company's 14 regional offices located throughout the eastern half of the country. An IBM 650 Magnetic Drum Data Processing Machine is linked with a number of Transceivers. This transmitting and receiving device duplicates sets of punched cards at remote points by means of telephone, telegraph, or radio circuits.

One of the first jobs to be handled will be Nationwide's new method of renewal premium billing. At renewal date, each regional office, which covers from 100,000 to 300,000 policyholders, and has its own installation of IBM punched card accounting machines, will place its punched premium cards

on its Transceiver. The data punched in these cards, including policy number, due date, and a series of nine codes which control the amount of premium due, are transmitted via leased telegraph wire to the home office. Here, another Transceiver simultaneously punches the data into blank cards.

At Columbus, the duplicate premium cards are placed in the 650, which "looks-up" the appropriate rate for each coded card from some 7,000 basic rates stored on the face of its magnetic drum. The computer automatically calculates the amount due for each coverage in the policy, and the total premium due from the policyholder, and produces these results in the form of punched premium renewal cards. These cards are then placed in a Transceiver which transmits the codes and the premium amounts back to the regional office.

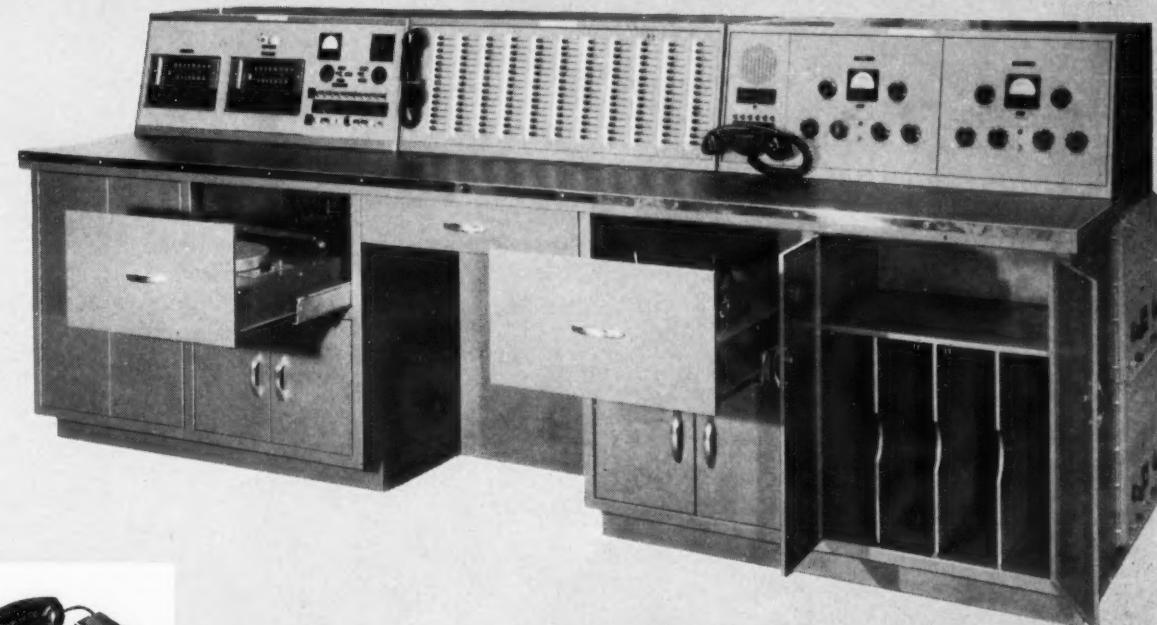
Here, the Transceiver punches a duplicate set of cards during the transmission. The regional office punched card machines collate these new premium cards with the policyholder's punched name and address cards, and use the two cards in turn to prepare premium notices automatically. The premium cards become the accounts receivable record, and are used to re-transmit the code for the next billing period. The name and address cards, corrected currently for any address changes, are used over and over again.



Form "pocket" carries tape

A new idea in protecting the punched paper tape used to repeat typed data automatically has been announced by American Lithofold Corporation. Users of Integrated Data Processing systems can now obtain a "built-in" I.D.P. Tape Pocket on any copy of a form set or continuous forms, to permit the tape to travel with the form. The new Pocket Form safeguards the punched paper tape produced on

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machines such as Flexowriters, tele-typewriters, calculators, etc., and makes it immediately available for feeding into other compatible equipment in the office.

It eliminates "mix-ups," loss, or damage to the tape which might occur if it is simply clipped to the form or filed. Tapes can now be folded, inserted into the pocket, and later removed by the typist. The pocket can be made any depth to accommodate punched cards as well as tape.

For more information, circle number 248 on the Reader Service Card.



New low cost computer

The first high speed electronic computer utilizing magnetics throughout, in lieu of filament tubes, has been announced by Remington Rand Division, Sperry Rand Corporation. The new computer employs a principal of magnetic amplification. It sells in the \$12,500 range, and handles computations with the speed of light.

It is claimed to be superior in many respects, to any other electronic computer. The amplifiers will perform accurately at temperatures ranging from -60° to $+220^{\circ}$ Fahrenheit. The amplifiers enable the construction of a machine which is simple in operation, yet diversified in performance beyond any existing computer of this kind. Present production plans will make the new computer available early in the year of 1957.



Analog-to-digital converter

A new high-speed, accurate analog-to-digital REA Converter has a capacity of up to 100,000 conversions per second, 30 millivolt resolution, and .1% guaranteed accuracy. It will accept signals from transducers, FM discriminators, FM or PWM magnetic tapes, film readers,

or other analog sources, and convert them to any desired digital code. Used with appropriate commutating, it will sample, in sequence, data from any number of analog sources. Digital output may be printed out, or used as input to a digital computer. Interim storage of the digital data can be accomplished, if desired, by a programmed magnetic tape unit. A high-speed input commutation switch, digital output magnetic recorders and programming circuits are among the new features offered in complete systems.

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For more information about the course, circle number 234 on the Reader Service Card.

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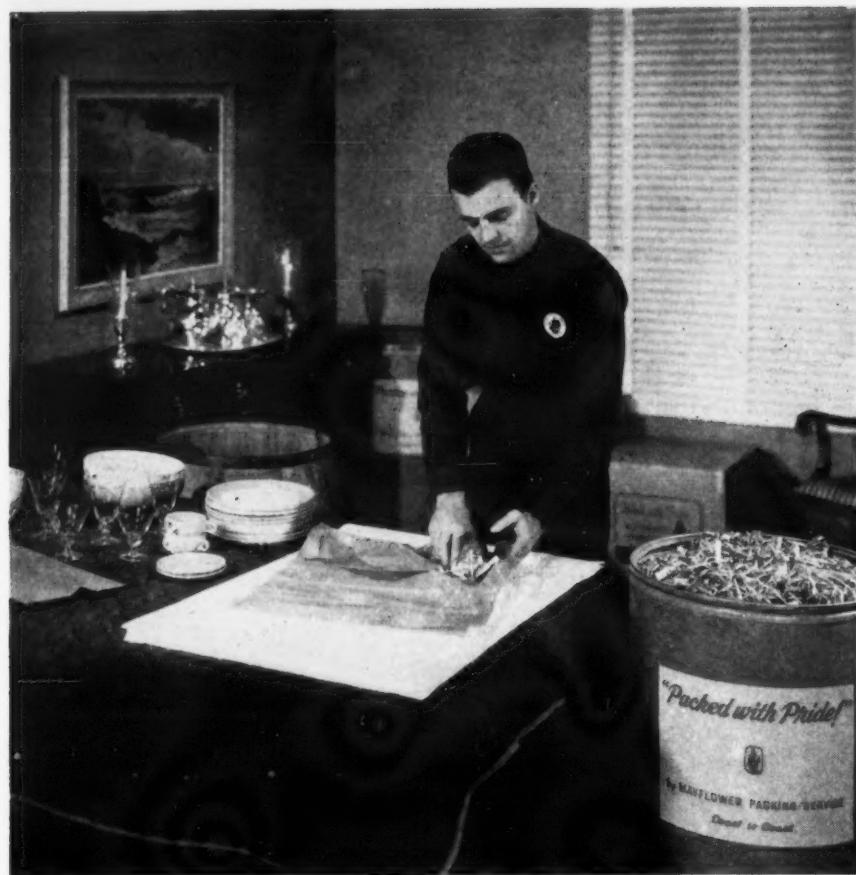
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(Circle 101 for more information)

tax quiz

Recent tax court cases

by Benjamin Newman, Tax Attorney, Koenig and Bachner, New York

THE QUESTION

May an employer decide whether persons employed by him are independent contractors? Is the employer required to produce records at the request of the Internal Revenue Service so that they may confirm this determination?

THE FACTS

Richard Beatty was engaged in a dispute with the Internal Revenue Service, which revolved around several persons who worked for Mr. Beatty. The question in dispute was whether they were employees for whom Mr. Beatty should pay Social Security taxes, or whether they were independent contractors. To resolve the issue, the Government sent an Internal Revenue Agent to investigate their status. Mr. Beatty refused to permit the Agent to examine his payroll records, insisting that the em-

ployees were independent contractors and consequently the details of their employment were none of the Agent's business. The Government insisted it had the right to resolve the question and served Mr. Beatty with a "Directors Summons to Testify and to Produce Books and Records". Mr. Beatty continued to refuse to produce his books and records pertaining to those persons whose status was under investigation. Could the Government compel him to comply with the summons?

THE RULING

The Internal Revenue Code provides that "No taxpayer shall be subjected to an unnecessary examination or investigation. . . ." Although Mr. Beatty contended the examination was unnecessary because he had determined that the employees in question were independent contractors, he was not entitled to make such a conclusive determination of the question. The

Internal Revenue authorities were entitled to make their own determination. If, after obtaining the facts, there was a difference of opinion, Mr. Beatty would then have ample opportunity to submit the dispute to the courts. Accordingly, Mr. Beatty was directed to produce the records. (*Beatty v. U. S., United States Circuit Court, 8th Cir., decided Nov. 22, 1955.*)

THE QUESTION

Must a corporation formally resolve to liquidate in order for the redemption of stock to be considered as distributions in partial liquidation, and not as taxable dividends?

THE FACTS

Over a period of years, from 1941 through 1948 the corporation in which Taxpayer was a stockholder had followed a consistent pattern of decreased income and periodic disposal of its operating assets. The policy of the management had been one with the objec-

tive of ultimate complete liquidation. In 1948 the corporation redeemed Taxpayer's stock. At this time, Taxpayer was the sole remaining stockholder. During all of this period the corporation never adopted any formal resolution of liquidation. Therefore,

contended the Commissioner, the corporation's redemption of Taxpayer's stock was essentially equivalent to a taxable dividend.

THE RULING

Liquidation is a question of fact. While it is true that the corporation never adopted any formal resolution of liquidation, and this fact should be given some weight, it cannot be decisive in determining the absence or presence of a corporate policy of liquidation. All facts considered, stated the Court, it would most certainly indicate that the corporation was, in good faith, since 1941, pursuing a policy of liquidation. The Court, accordingly, concluded that the distribution to Taxpayer in redemption of his stock was a partial liquidation within the meaning of the code. (*McDaniel v. Commissioner, U.S. Tax Court, decided Nov. 22, 1955.*)

THE QUESTION

Is a taxpayer guilty of civil fraud when erroneous tax returns are prepared by his accountant and based on information submitted by him?

THE FACTS

Taxpayer did not keep regular accounting records for the years in question. He kept a day book in which he listed all sales consummated at the place of business. However, larger sales were transacted at the bank and were financed by chattel mortgages executed there. The proceeds of such sales were immediately deposited and the customer's name noted on the top of the deposit slip. Ordinarily, the sales made at the bank were not listed in taxpayer's day book. Taxpayer's accountant prepared his income tax returns through use of the day book, checkbook, bank deposit slips, bank statements, and records of physical inventories. Taxpayer failed to advise his accountant that the day book did not contain all of the sales. Is Taxpayer's dereliction tantamount to fraud?

THE RULING

The evidence indicated that the data



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furnished Taxpayer's accountant was sufficient to prepare proper returns. Taxpayer's accountant, however, prepared the returns based on estimates made by him, rather than on the data furnished. While there was evidence that might arouse suspicion of fraud, declared the Tax Court, there was no evidence of any affirmative act of fraud. They resolved the issue in favor of Taxpayer. (*Hart v. Commissioner, U. S. Tax Court, decided Nov. 29, 1955.*)

THE QUESTION

Where Taxpayer is advised by his physician that the summer and winter climates of his place of residence are detrimental to his health, is transportation and living cost in more beneficial areas deductible as medical expenses?

THE FACTS

Taxpayer's late husband had suffered from generalized arteriosclerosis, and had been advised that the summer and winter climate in St. Louis was detrimental to his health. Upon his physician's suggestion that a stable, warm climate should be sought the year round, the husband adopted the routine of spending his summers in the North, winters in the South, and the spring and fall in St. Louis. Taxpayer accompanied her husband during 1947, 1949, and 1950, since he was subject to "dimouts" and could not be left alone. In 1947 and 1949 they visited their eye doctor in Tulsa and received treatment.

THE RULING

The Tax Court said: "Although it was desirable, in order to slow down the process of vascular deterioration, to seek a warm, equitable climate, and it was certainly inadvisable for the husband to travel and live alone during a large part of the year, the choice of this migratory life over permanent settlement in a salubrious climate was apparently motivated entirely by personal considerations, including the desire to spend most of the year in St. Louis." Since the trips were not made in order to receive medical care, the Court held that expenses incurred for transporta-

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(Circle 143 for more information)

FEBRUARY 1956

tion, food and lodgings while on trips to the South and North were primarily personal expenses, and were not deductible medical expenses. However, it was held that the money expended on the trips to the eye doctor in Tulsa in 1947 and 1949 were deductible medical expenditures. (*Bertha M. Rodgers v. Comm.*—Mar. 18, 1955, 25 TC—No. 36.)

THE QUESTION

Is the use of the net worth theory of reconstruction of income valid in the case of a deceased taxpayer?

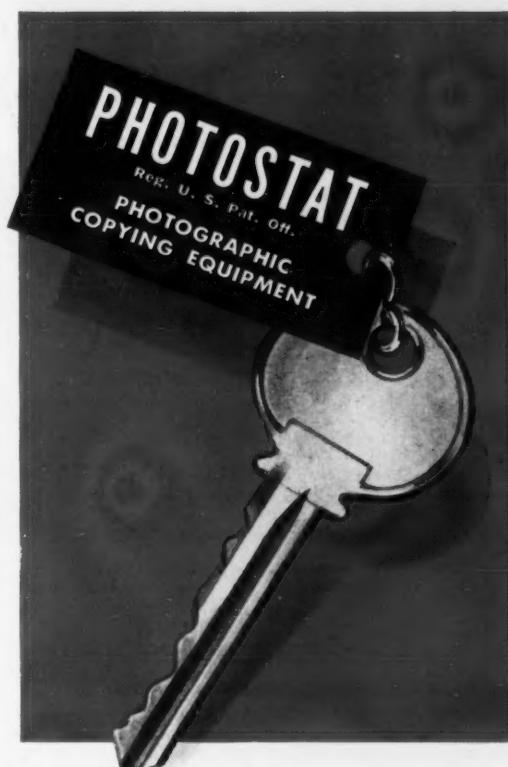
THE FACTS

The administrator for the estate of the taxpayer appealed a U. S. Tax Court ruling which found the taxpayer guilty of civil fraud for the years 1942 through 1950. It is the contention of the administrator that the Government's use of the net worth theory of reconstruction of income was improper in this case because the investigation and audit were not begun until after Taxpayer's death. A prerequisite to a fair and adequate defense in a net worth theory case is the right of the taxpayer to rebut evidence submitted by the Commissioner, contended the administrator. Furthermore, the administrator argued that Taxpayer's penalties do not survive his demise.

THE RULING

Proving tax delinquencies by use of the net worth method is merely a method of proving a case by the use of circumstantial evidence, explained the Court. No statute forbidding the use of such evidence is cited, the Court declared. While the submission of Taxpayer's administrator, that Taxpayer is deprived of an opportunity for explanation, is meritorious and entitled to its due weight in determining the value of the circumstantial evidence, it can really have no proper bearing on its admissibility. As to fraud penalties, concluded the Court, they are but civil administrative sanctions of a remedial character in aid of the assessment and collections of taxes, and are not treated as penalties which die with the offender. (*Lee, Admr., et al v. Comm., U.S. Court of Appeals, 5th Circuit, 11/25/55.*)

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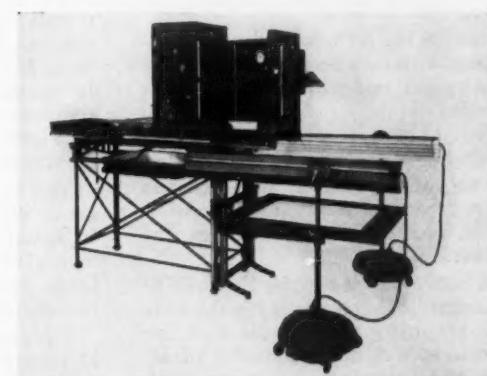
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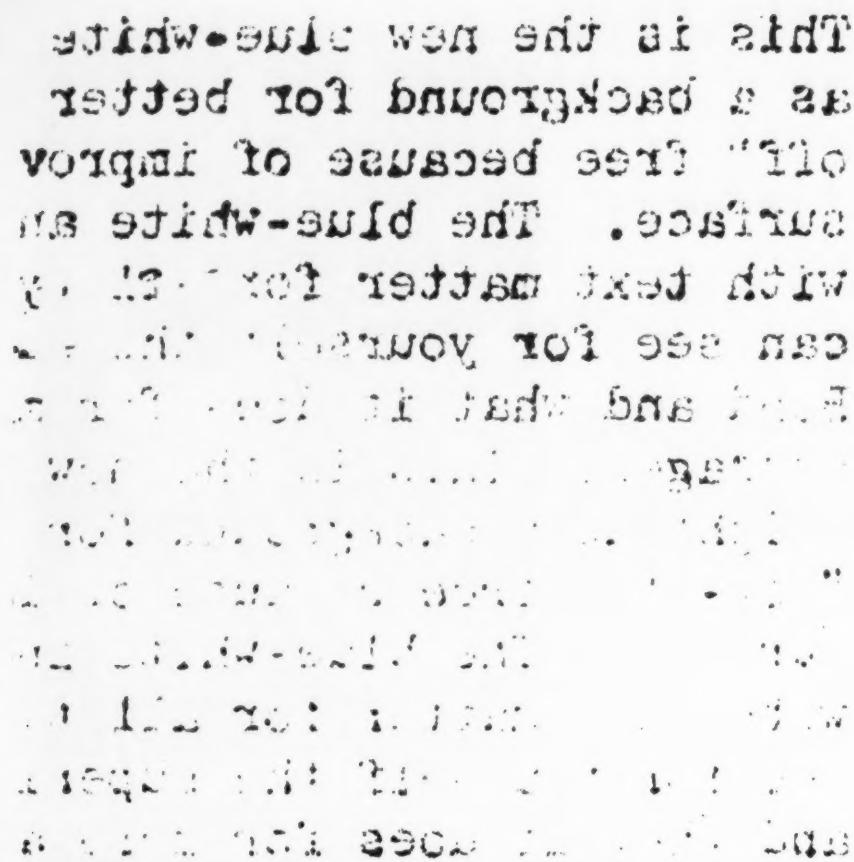
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sales ideas

The Credit man Sales man partnership

by Joseph L. Wood
Ass't Treasurer, Johns-Manville Corp.

In most companies, there's steady bickering and debate between the Credit and the Sales departments. In spite of the inherent difference in attitude between the two functions, there is little good reason for the sub rosa warfare. The responsibility for peace making, however, lies with the credit man. In effect, he must establish a *partnership* with the sales manager and his men.

It is generally recognized, of course, that salesmen can not be trained and utilized as credit reporters or collection agents. There are notable exceptions to this rule—such as certain types of business selling to a large number of retailers, in which much dependence must be placed in the salesman as a collector because of his frequent contacts with the customers. For the most part, however, the credit man can and does secure more and better credit information through his established channels than can be obtained by the salesman. Moreover, the salesman is handicapped by his preoccupation with making a sale and his natural desire to avoid any situation which might tend to affect his sales position.

This does not mean that salesmen should be divorced from credit and collection problems. Properly used, this

information can be converted into a powerful selling tool. For example, if a salesman knows in advance that a certain customer is outside of the credit circle, he is able to weave into his sales presentation, at the first call, a proposal to sell on C. O. D. terms. He presents it as a natural assumption that this is a satisfactory and usual arrangement. Sales resistance to such a proposal is usually not great *when it is made at the initial presentation*. On the other hand, if the salesman is uninformed as to the prospects' finances, he is often put in the very embarrassing position of returning to the customer to gain an acceptance of C. O. D. terms.

Educating the sales force

The first step which the good credit man takes is to get to know the salesmen intimately. It's generally wise to analyze his territory with him, gain a knowledge of his problems, and offer suggestions when pertinent.

In many businesses, which require the salesmen continuously to add new accounts, the credit-sales partnership is aided through furnishing the salesmen with pocket-edition Dun & Bradstreet rating books which are published for each state. They provide the salesmen with valuable information as to the credit standing of the prospects in his particular territory.

This results in a considerable saving in time and effort which might otherwise be expended in attempting to sell an account which could not meet necessary requirements.

These ratings are not infallible, however. Many a merchant with a so-called

MR. WOOD is the author of the recently published **BETTER SALES THROUGH CREDIT** (Vantage Press, 120 West 31st Street, New York 1, N. Y.; \$3.00). The subject of the credit-sales relationship is more fully covered in one chapter of the book. Mr. Wood is president of the Sales Executive Club of New York.

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"blank" rating is an acceptable credit risk. It must be remembered that he may have a "blank" rating merely because he has not given the agency a financial statement. Nor does it follow that the merchant with a high credit rating would make the best outlet for the salesman.

Some credit men have successfully convinced their salesmen that, on certain occasions, it is wise to have him present when calling on a customer. The more often these joint calls occur, the sooner the salesman is apt to recognize that the credit man, too, has a sales-minded approach.

Actual case history

Lest this dubious partnership and technique seem far fetched, here's a concrete example taken from an actual case history.

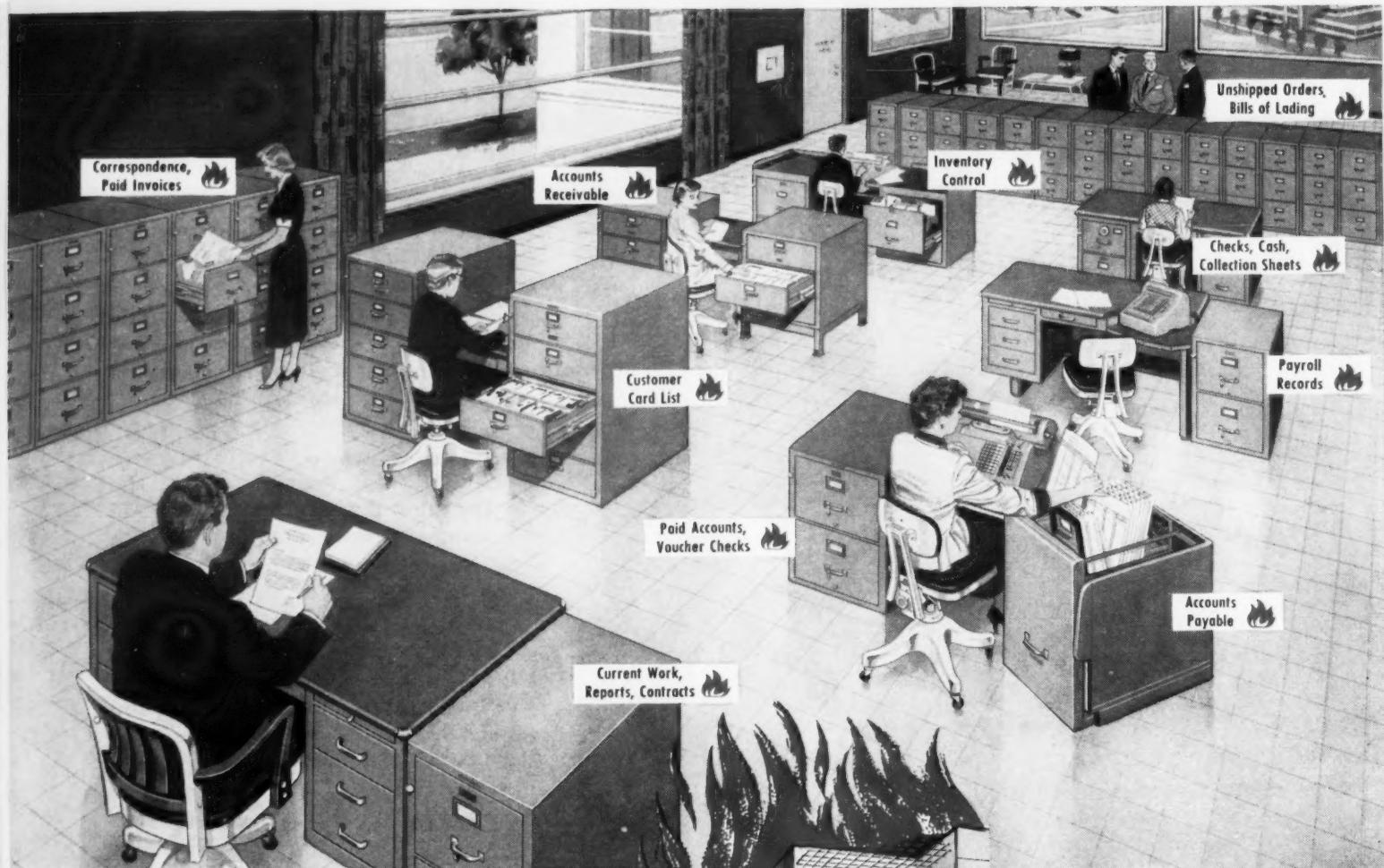
A company in Michigan had a dealer who was unable to keep his account in line. As a result, the salesman was handicapped by credit restrictions and consequently, loss of volume. He asked the credit man for help. The two men called on the account together. The credit man found that the trouble was partly due to slow accounts-receivable turnover and this was obviously caused by laxity and timidity in collection follow-up. But, he also found the gross profit of the dealer seemed to be inadequate. With the dealer and the salesman, he carefully reviewed, invoice by invoice, the dealer's mark-up method. Some evidence of rank carelessness in pricing was observed, but the obvious sore thumb was a single customer to whom the dealer made rather large sales. They found that this customer habitually issued tenders calling for bids. In order to get the business, the dealer was shading his price to a point where he was getting a mark-up of only 6% whereas his overhead was running 21% of sales! The credit man convinced the dealer that a minimum mark-up of 27% was necessary.

Two weeks later, the salesman wrote, "the dealer quoted 27% up on an inquiry for \$3,000 and, to his surprise, got the order!"

Knowing when to say "yes"

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credit man can go to rather unusual lengths—even to the extent of accepting an order on which payment is certain to be long delayed. Here's one rather striking example.

An example cited

The credit man for a mid-continent manufacturer was faced with a substantial order from a new account in a territory hitherto unopened. The new account—a dealer—was in bad financial shape. His balance sheet showed heavy inventories and still heavier payables, with cash virtually non-existent. Creditors were pressing and the situation clearly called for a creditors' committee or a receivership to prevent dissipation of substantial assets.

Sales and Credit got together to discuss the situation. If the credit man accepted the order, he knew his turn in the collection cycle would not be reached in any reasonable period and there was a strong possibility that a receivership would freeze it indefinitely. Yet it was the very probability of a receivership action which determined his approval! In fact, except for the likelihood of a receivership, he could not otherwise have accepted the order.

Outlines reasons

He reasoned this way: if the order were approved and a receiver did not intervene, he would have a continuing and mounting problem of what to do with future orders. It was possible, and even probable, that he would become heavily involved, to the extent of assuming the position of "angel" in paying off other creditors with the proceeds of his material. At the same time, it would be of little value to open a new territory with a one-time sale.

On the other hand, a receivership, while freezing the *initial* credit, would afford ample protection for subsequent credit and establish a much-needed outlet for his company.

The receiver took over within 30 days. The management, continuing under the receivers' control, was grateful for the credit extended in time of need and the products of Credit Man's company were honestly promoted. Over the course of the following five years, purchases—all discounted—totaled over \$2,000,000. The net profit was many times the frozen initial order. m/m

The Incident Process



.... **ONE DAY**, Mr. Deane, Vice President and Treasurer, was walking through the machine shop of his company. As he passed one of the operators, he noticed that this worker was tying a knot in an oil rag. It flashed through his mind that, a few days earlier at lunch, the plant superintendent has mentioned his concern about horseplay in the shop. Operators had taken to pelting each other with knotted oil rags.

After Mr. Deane had walked a few yards further, a knotted oil rag hit him hard in the back of the neck. Imagine that you are in Mr. Deane's position. What might you do?*

* © Bureau of National Affairs, Inc.

A NEW TECHNIQUE IN MANAGEMENT DEVELOPMENT

The incident described above is not hypothetical, but one of a group of 16 taken from real life. These form the basis for a new method of developing executive skills. This new technique, which has been given the name of "The Incident Process", has been worked out by Prof. Paul Pigors, of the Massachusetts Institute of Technology, and his wife, Faith. First introduced in 1950, in his courses in industrial relations, it has been used by a number of firms, including the Bell System, Pratt & Whitney, Aluminum Company of America, TransCanada Air Lines, plus various government agencies.

Application of the technique has been made considerably simpler with the recent publication of a manual, handled by The Bureau of National Affairs, Inc., issued in response to the increasing demand of training directors for some assistance. In addition to the manual, BNA has been sponsoring short seminars, or training courses, under the direction of Dr. Pigors. Interest has been growing by leaps and bounds.

How "the incident process" works

It is basically a variation on the case history method, which was first introduced as a technique of management development by the Harvard School of Business Administration almost fifty

years ago. It carries the group discussion method one step forward, however. During his work at Harvard, Dr. Pigors noted that one fault of the case history method was its reliance on advance preparation. If an intelligent discussion was to be obtained, group members were required to read all the documents about a case and to think out a solution before the class session. This was all right in a college situation, where men were spending full time on their studies, but when the method was transferred to in-service situations, busy executives often couldn't find time to do homework. And, as the method was extended to supervisors and foremen who had less formal education, he learned that this approach was too sophisticated for them. In addition, in real life, people aren't given a neatly collected portfolio which contains all the facts. The carry-over from classroom to plant often became difficult. As one graduate of a case-history course admitted: "Everything was so simple in the seminar! There was a problem, an issue, and the facts. But in the plant, I can't see a problem—all I can see is a mess! And I just don't know how to get started."

A training situation is most effective when it mirrors most closely the actual real-life situation. The Incident Process comes close to the real thing. While a

supervisor will learn most from actual performance on the job, the proper situations do not arise very often, and when they do, a mistake in handling may be disastrous. This classroom technique of group discussion is as close to an actual situation as has yet been devised. To see how it operates, let's sit in on a typical session.

The group in action

The particular group we have chosen to observe is made up of about 15 foremen. They have come directly from the plant, and are still in their work clothes. This is an in-service program, and is held during the regular working day. Of the entire group, only two of the men have done any advance work. These two, volunteers from the group, will be Discussion Leader and Observer-Reporter for this session. They, along with the company Training Director, have gone over the case and the materials provided.

Each member of the group has his own notebook, but there is no material—as yet—covering this session. The meeting is opened by the Leader, who announces that they will talk about the incident of the oil rag. He then hands to each member a single sheet of paper, punched to fit the notebook. On it is printed, exactly as at the head of this

article, the incident. A few minutes, not more than five, are spent reading and thinking. Then the real part of the meeting gets underway.

The questions start flying. Why questions? Well, go back and read the incident once again. If you are a thoughtful person, you will realize that there are not enough facts to allow you to reach a decision. You need more information, and in real life you would get it by asking questions. This is exactly what you do now, with the difference that the Leader is the only man who has the facts.

So the questions come from members of the group. Why was a Treasurer walking through the machine shop? Did he have any business there? Who was the foreman, and where was he at the time of the incident? Was the plant small enough so that Mr. Deane was known to, and knew, all employees? What was the company policy on discipline? Who administered it? Was there a union steward on the scene? Who was the worker whom Deane saw knotting the rag? What kind of a record did he have?

As the questions are asked, the Leader gives the answers. Most of the answers he gives verbally, taken from the description of the incident in the leader's manual. Some are too compli-

cated to be remembered, so he hands out a written sheet, which fits into the individual notebooks. Where necessary, he replies that he doesn't have the information. He does not make up answers to questions.

The number of sheets that are available for handing out vary from case to case, with a couple having only one sheet, while one has as many as 12. The oil rag incident has just three, one giving the organization chart of the company, another a description of certain key duties, and the third showing the company attitude toward excessive in-

ventories which frequently comes up as you get into the discussion of this case. Other incidents use handouts that quote the union contract, that show the plant layout, or reproduce statements and affidavits.

Coming to a decision

The questioning should take about twenty minutes of a two-hour session. One of the signs of development of a group is the fact that they take less time in this part of the meeting. They waste less time in unnecessary or repeated questions as their skill increases.



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THE INCIDENTS

These are brief summaries of the 16 incidents included in the BNA manual. They are, as you will note by referring to the full text of the oil rag incident that is quoted in the article, written in a narrative form. This is a bare "summary of a summary."

THE COFFEE CASE — Administration of Plant Rules

An employee refuses to accept a warning notice issued for buying coffee after the morning starting whistle.

THE OIL RAG INCIDENT — Responsibilities of a Treasurer

A company officer is the victim of horseplay when he gets hit by an oil rag as he walks through the machine shop.

THE WRITTEN REPRIMAND — On Disciplinary Process

Two workers, threatened with a transfer for poor work, refuse to acknowledge and sign for an 'official reprimand.'

THE SALES BONUS CASE — A Conflict of Loyalties

A mechanic tries to take advantage of a bonus policy by steering a truck sale to his company. The bonus is refused, the sale falls through, the mechanic is fired.

THE PLANT GUARD'S GUN — Employee Behavior Off Duty

A plant guard, involved in an off-duty argument, uses his pistol.

THE BOISTEROUS BUS DRIVER — Invasion of Employee's Privacy

An off-duty bus driver tries to cash a paycheck in the terminal, becomes unruly when refused, and is fired.

THE GROUP GRIEVANCE — Foreman's Responsibility in Grievances

A group of 14 men present a common grievance, their foreman refuses to call the shop steward, refuses to talk to the entire group, and finally suspends all 14 men.

THE CRANE LIFT INCIDENT — Functions of a Shop Steward

A worker is ordered to pick up a load which he feels is dangerous, appeals to his shop steward, who explains that he does not have to do the job if it is dangerous. The foreman gets angry, fires the steward.

THE 'PUBLIC' APOLOGY — Conduct of a Local Union Committeeman

A worker and local union official apologizes 'as a condition of continued employment' for personal remarks he had made during an earlier altercation, but in spite of the apology, the company refuses to pay him the wages he lost during suspension.

THE SATURDAY OVERTIME INCIDENT — Overtime Work

After Saturday work was scheduled, some workers were absent without explanation. They protest warning notices that go into their record.

OVERTIME, HECK! — Overtime Work Assignments

After agreeing on Friday to work on Saturday, an employee fails to come in or to report his absence, is suspended for 10 days.

THE PARKING INCIDENT — Enforcement of Plant Rules

The company has requested that a stretch of sidewalk, public property, in front of the plant be kept free for visitors' parking. The local union president feels this is not within company powers, parks his car there, and dares the company to fire him. They do.

THE HARD-WORKING FOREMAN — The Functions of A Foreman

An assistant foreman is seen working on 'production jobs' and the union files a grievance.

INCIDENTAL WORK — A Disputed Work Assignment

A mechanic, performing night shift repairs on a broken machine, uses the carpenter shop. The union objects, claims a carpenter should have been called in.

THE MISSING TELEPHONE — 'Availability' for Work

A vacancy on a line crew is not filled because the company feels that 'no competent application' has been filed. A crew member disputes this judgment of his competence.

THE QUESTIONABLE HIRING DATE — The Probationary Employee

A worker files a complaint because the company changes his official hiring date, cutting 3 months off his seniority.

Now is the time to formulate the issue. What are we really talking about? What are the points at stake? In the Oil Rag incident, the leader's manual states it this way:

When a top executive, in a staff position, is provoked to take direct disciplinary action, what might he do—1. on the spot, to meet immediate requirements, and 2. later, to strengthen his organization as a whole?

The group may not put it in quite these words, but with the guidance of the Leader, they will most likely reach the same general area. If not, it isn't too important, as long as the issue is clear and it is an actual issue.

The Oil Rag incident is somewhat exceptional in that the issue remains pretty much within Mr. Deane. There is in most of the incidents a conflict between management and employee—a conflict strong enough so that it ended before an arbitrator.

Take the Incident of the Plant Guard's Gun, for example. Here a guard was discharged on the basis of the way in which he handled his weapon in a parking lot incident not strictly within his line of duty. The Union challenged his discharge and the case went to arbitration. The arbitrator's decision stated the issue as it was submitted to him:

1. Under the terms of the Company-Union Agreement effective November 1, 1952, was the discharge of Floyd Cullings for just cause within the meaning of Article 1, Section 6?
2. If the answer to question one is 'no', what adjustment does the arbitrator order to be made?

In this case, the group member, asked to act as arbitrator, must realize that he has no authority to challenge the validity of the contract clause, even though he may think it unwise or even silly. In stating the immediate issue, he must be guided by this framework. Later the discussion might very well get around to the wisdom of the clause, or whether it is working out in the way the contracting parties thought it would, but an arbitrator cannot rewrite a contract, and at this stage the group must grapple with the actual issue.

Once agreement on this has been reached, each member of the group can take his position. This is done in writ-

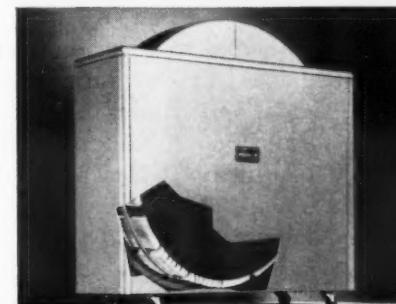
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ing, with the reasons included. On the basis of these statements, the group is divided into subgroups, each of which holds a separate position. In the Oil Rag Incident, there are three main positions. Mr. Deane might take immediate action and discipline the man he suspects; he might report the man to his supervisor and insist that some action be taken; he might ignore the whole matter.

The men of like minds get together, in different corners of the room, to exchange their reasons and select a spokesman to present their viewpoint to the others. When the group reassembles, a miniature debate takes place. At this point, people can change their minds if they want to, but such a shift is rare.

In many cases, there can be only two positions. Either Floyd Cullings, in the Plant Guard's Gun incident, was properly discharged or he was not. If his discharge was improper, then other action would have been open to management, and much fruitful discussion can take place on alternative proposals.

Most of the cases included in the series have an issue that can be stated in a direct question to which only two answers are possible. All of them are actual incidents, with most having been selected from BNA's arbitration reports. Thus the names of the participants, the companies, the unions are all authentic. And there is an authentic decision of an arbitrator, which is passed out at the end of the session to round up the notebook.

The oil rag incident, by the way, was one of the few that did not reach arbitration, but a full report of what happened is given, broken down into the two phases of the issue as stated.

1. *Meeting the immediate requirements of the situation* The Treasurer realized that as a staff man he could not properly initiate direct disciplinary action in any department except his own. He picked up the rag and, after depositing it in the nearest trash can, went on his way to the stockroom.

2. *Later, he decided to let the matter ride for a bit.* A few days afterwards, he made a point of taking another walk through the Machine Department. As he passed Melvin Johnson, the latter spoke:

"Oh, Mr. Deane, you remember the other day, you got hit by an oil rag?"
Deane: "Yes?"

Johnson: "Well, . . . er . . . it was me that threw it. I was aiming at Blake (an operator across the aisle). But I hit you instead. I'm awfully sorry."

Deane (smiling): "I had an idea you might possibly have had something to do with it. And I'm glad you realize that this sort of thing won't do. It might have been a good deal more serious. And of course we can't risk having such a thing happen to a customer."

This concludes the discussion of the incident itself, and the two-hour period should be just about half over. But it doesn't conclude the discussion. Usually the larger issues have been hinted at in the earlier part, but the leader had kept the group on the subject. Now he is ready to get into the larger implications of the issue. If necessary, he can ask a couple of leading questions to get things rolling in the right direction. In the Oil Rag case, what's wrong with horseplay if it doesn't do any real damage to production? Doesn't it help build morale, friendliness? Yes, but what happens when horseplay and safety rules conflict? Which comes out ahead? The incidents themselves have been selected to lead naturally into the major areas of management problems.

Questions often asked

During the past year, BNA has sponsored a number of short seminars on the method, at which training directors have had an opportunity to observe the method in action, to talk to Dr. Pigors, and to ask questions. Here is a synthesis of the more common questions asked at these seminars:

Q. The incidents all seem to be taken from shop experience. Doesn't this limit the method to factory groups?

A. Not at all. The technique has been used successfully from top management down to first-line foremen. The incidents have been chosen for their basic human values, and while it may take a non-factory group a little longer to get to the point, none of them are really too technical.

Q. Isn't it a problem getting volunteers to be leaders?

A. Not as great a one as people would think. When the Manual was being tested before publication, a group of

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first-line foremen was selected. But the company officials felt that if these men were urged to lead the group, the discussions would be a failure, and the whole company program would suffer. But the member's manual, distributed at the end of the first session, carries a mention of volunteer leaders, and this was enough to produce, without urging, enough volunteers for the entire series.

Q. Can volunteer, untrained leaders do as good a job as somebody trained in group leadership?

A. Often a better job. Bernard Rice, Director of Training at the Metal Products Division of the Koppers Company, has used the method regularly and gets evaluation sheets at the end of each series. Of a recent group of 13 foremen, 10 preferred to have members of the group as leaders. As one of the unsigned critiques pointed out, "I feel that a group member by acting as a team leader gets experience that tends to make him confident before any group." Other men felt that the group benefitted through a more open relationship and a shorter warm-up period.

Q. Is a leader given any advance training or preparation?

A. He gets a leader's manual, a general discussion of the role of the leader in this type of group, plus a detailed discussion guide of the incident which he will handle. In addition, he will talk over his approach and plan the discussion with the Director of Training and his fellow group member who has volunteered to be that week's Observer-Reporter.

Q. What is an Observer-Reporter?

A. He helps the leader plan the meeting, but during the meeting itself he takes no verbal part in the discussion. He observes how the group operates as a group, what questions are asked by whom, who summarizes, who leads, where the group got side-tracked, and so on. Later he reports to the group on its group behavior. It is a job that is somewhat difficult to describe, but it is important in group development.

Q. Are you limited to the incidents in the manual?

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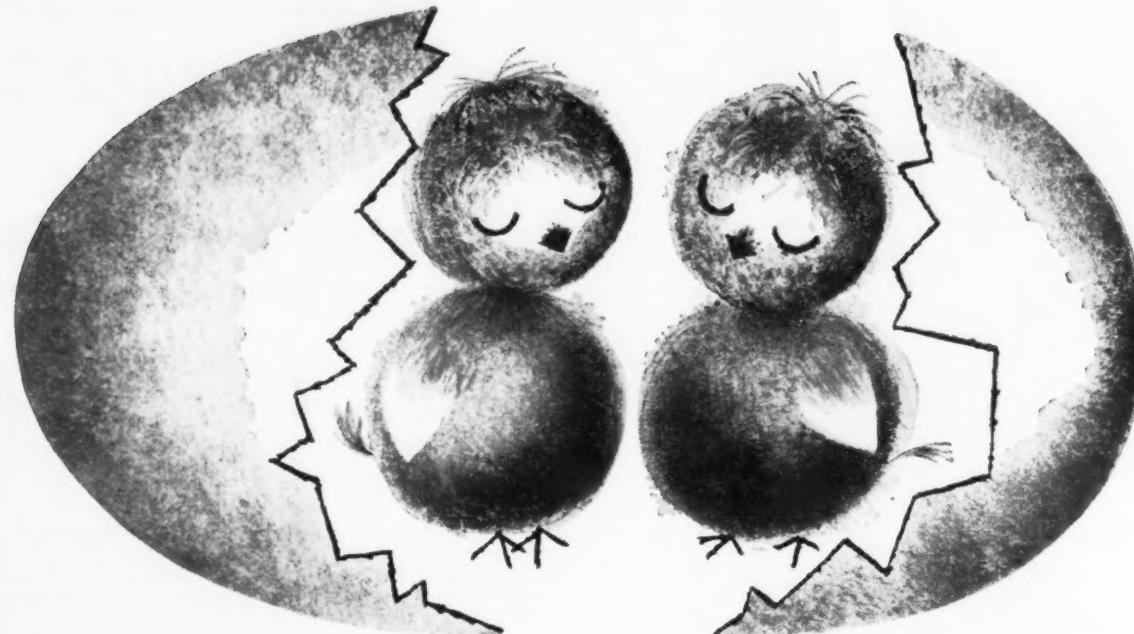
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A. No, but it is not a simple matter to add new incidents. However, if you can include incidents from your own company, it is very valuable. Writing up an incident is itself an education for the man who does it, and such an incident can bring the group more easily into areas where discussion is needed. Also, the Director's Manual has a section on how to select and prepare an incident. Mr. Bryan, of Goodyear, has used cases from his company's files, but he warns that "one of the biggest pitfalls that a new user must avoid is the temptation of making up answers to the questions concerning the case rather than doing a thorough job of fact finding. It is just as important to get all the facts on the case under this method as it is in using the standard Harvard technique."

Q. How long should a series run?

A. A perhaps too-glib answer would be "Just as long as the participants are getting something out of it." However, once a week for twelve weeks seems to work out pretty well. Use session #6 and #12 for a bull-session on how the group is working out, which leaves room for 10 incidents. You can use any of the 16 furnished in any order that seems to fit your situation, or you can work in as many of your own incidents as you would like.

Q. Once all your men have discussed all the incidents, are you through with the method?

A. Of course, new men are always moving into positions that need training, but if the question refers to the possibility of a man going through the course twice, it has been done successfully. It is better if the groups are shuffled on the second go-through, so that new viewpoints are available. On repeat sessions, the fact-finding and decision-making parts of the meeting take much less time, and the group can spend more time on the broad discussion of principles.

New incidents are being collected and prepared, so that it will eventually be possible to go for a substantial period without repetition. m/m

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by H. L. Minckler
General Mfg. Supt., Plastics Division
Monsanto Chemical Co., Springfield, Mass.

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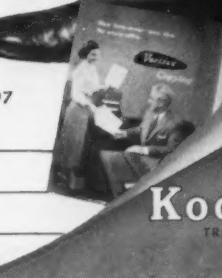
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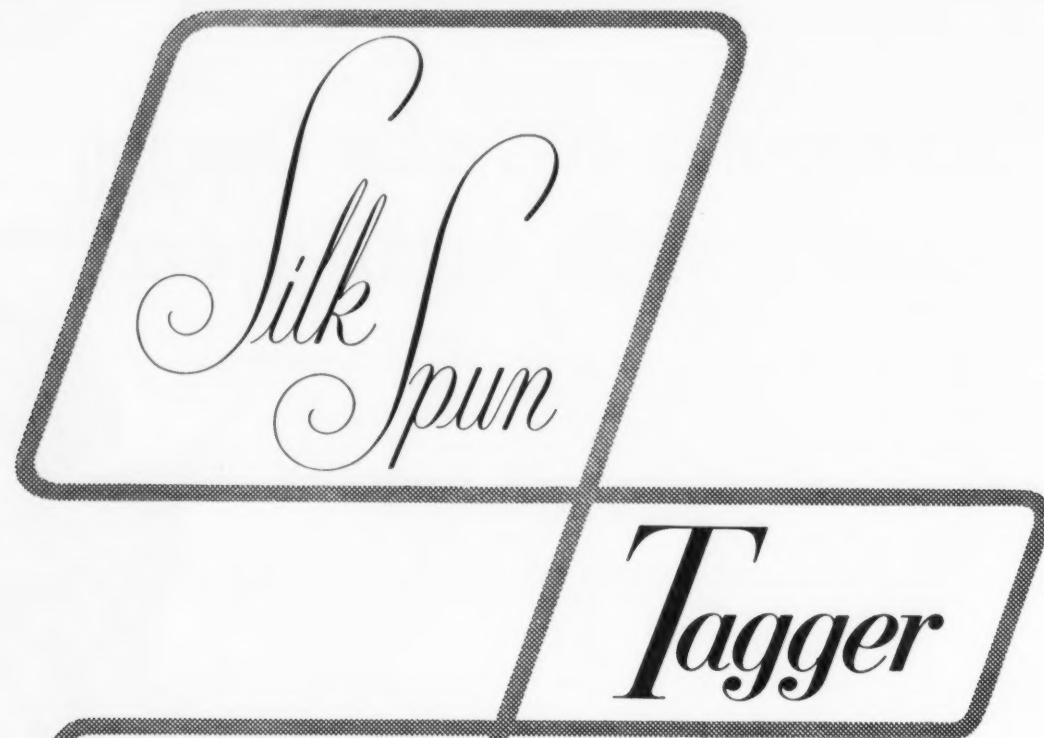
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mated \$600,000 for other uses. The superintendent of this new department is on a level with superintendents of the major manufacturing areas, reporting to the plant manager.

Annual forecast of needs

An annual forecast is supplied by the sales and business research departments and is broken down into individual material and container needs. The purchasing department contracts for the needed materials for the coming year, indicating the rate of delivery needed to keep supplies within levels set by the inventory committee. To keep abreast of variations from the annual forecast, each product sales manager submits monthly a two-month forecast for his products. The production planning groups convert this to raw material needed to produce the forecasted quantities.

The materials coordination section of the transportation and materials department consolidates plant-wide needs and issues requisitions to the purchasing department with a schedule of requested deliveries. Average inventory is 30 days' supply, of which twenty percent is material in transit.

Deliveries from warehouse to manufacturing are made by transportation and materials department trucks and dollies, coordinated by a central dispatcher with two-way radio. All requests for service are funneled through this dispatcher by phone, avoiding the need for requisition-writing by numerous individuals.

Material coordination keeps charts plotting forecasted and actual usages of raw materials as a check on the accuracy of forecasts. The same group also scrutinizes data on material receipts and usages projected in terms of days' supply against sales-forecasted monthly usage.

Inventory control charts, plotted by the planning manager, show whether finished goods inventories are in line with the policy established by the inventory committee. Deviations from the authorized rate of build-up are carefully watched.

As a result of better utilization of men and machines through the two-way radio system, productivity in handling of materials has improved steadily, and the trend of warehousing costs has been consistently downward.

Other benefits of this system are reductions of obsolete and slow-moving items; improved customer service; increased awareness of inventory costs at all supervisory levels; improved forecasting as a result of follow-up; reduction of demurrage; and improved vendor relations due to long-range planning. m/m

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If you hold stock in a close corporation, here's how your company can carry the cost

Financing a stock purchase agreement

by Paul Brower
Director, Advanced Underwriting
Mutual of New York

EDITOR'S NOTE: In the June, 1955 issue of MANAGEMENT METHODS, Mr. Brower discussed the compelling reasons for establishing a "market" for the shares in a close corporation or partnership when a stockholder or partner dies. They included: assured control of the firm by the survivors, a predictable stock valuation for the estate, and an improved tax situation for both estate and survivor. In the article below, he discusses one good plan for financing this arrangement.

Picture this situation. The three principal stockholders in a close corporation have been alerted to their needs for a stock purchase agreement in case of the death of one of the parties. Since none of them are rich men, they recognize the soundness of funding the agreement with life insurance. The funds from the life insurance will permit them to pay off the estate of the deceased in a lump sum—something none of them could do easily out of their own pocketbooks.

But even this doesn't solve their problem. There is still the cost of cross-insurance to pay. Cross insurance is the usual plan which calls for each stockholder to buy out the other and to own, pay for, and be the beneficiary of the insurance on the other's life. It's expensive.

Ideally, they would like to have their Corporation pay these life insurance premiums. In effect, they want to have their cake and eat it.

The corporation purchase plan

Thanks to a variation in the usual criss-cross plan, it's possible for the stockholders to accomplish their purposes without paying the premiums personally from their funds.

Let's review the situation. The three principal stockholders are agreed that,

if one of them should die, his family is to be paid off for the value of his interest. In this case, however, the corporation is paying the insurance premium and therefore is the beneficiary if one of the parties dies. So, the corporation is obligated to buy the deceased's stock, and the deceased's executor is obligated to sell, according to the price set by the agreement. The stock then goes into the corporation's treasury.

The corporation, after receiving the stock, can retire it, hold it as treasury stock, or sell it to the surviving stockholders. Usually, the Stock Retirement Agreement doesn't cover this action since it's unnecessary. The important objective has been accomplished anyway—the survivors own the *outstanding* stock. They have undisturbed control of the business and the deceased's family is compensated, through life insurance, for the deceased's business interest in the firm.

It's more than just money

The money angle to stock retirement—the use of the corporate dollar and the two-pocketbook feeling—is its big attraction. After all, there are just two ways in which the employee-stockholders get their money out of the corporation—Salaries and Dividends. Though the corporation gets a deduction for salaries only, the stockholders must regard both as taxable income. If either of these items is increased in amount, a greater tax liability will follow. Since the stock retirement plan calls for the corporation to pay the premiums, individual taxes will be held down because neither salaries nor dividends will necessarily have to be increased.

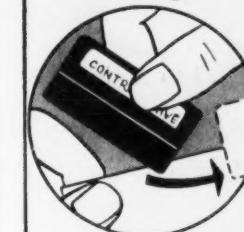
This dollar advantage is important (sometimes, all important), but there are other good things that can be said about stock retirement over a criss-cross stock purchase plan.

1. Age Differences: Premiums, in large measure, depend upon the insured's age. Often, when a criss-cross purchase is being considered, a relatively young stockholder will balk on the idea of paying larger premiums on the insurance he must buy on his older stockholders (especially since he will, in many cases, be a junior stockholder, drawing down less money.) The Stock Retirement Plan can overcome this objection because, under it, all premiums, in a sense, are pooled and each stockholder, in effect, pays a proportion of the total, based on the size of his interest in the business.

2. Mechanics: Take a criss-cross plan. If there are four stockholders, twelve policy contracts are needed. Under a stock retirement plan, only four are needed. Increase the number of stockholders, and the administrative job for the business, becomes increasingly burdensome. In one recent case, there were 21 stockholders. If each were to own a policy on each of his co-owners, as called for by criss-cross, 420 policies would have been necessary.

3. Underwriting Problems: These must be considered. Take a corporation with four stockholders—A, B, C, D, with interests of \$10,000 each. Under criss-cross, A, C, & D would need \$10,000 to buy out B (when B dies, each would need roughly \$3,300 to put toward the purchase price.) Financing the plan through life insurance, all types of policies would not be available because of

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limitations as to amounts which are written on certain policy issues.

Under Stock Retirement, the Corporation would be in a position to apply for \$10,000 on each of the lives—A, B, C, D.—without regard to limitations.

Questions asked about the plan:

Here are the four questions most often asked about the Retirement Plan:

1. Does the corporation have the ability (authority) to buy back the stock of a deceased stockholder? In practically

all states, it is permissible so long as the corporation is in a surplus position.

2. What about creditors? The corporation owns the insurance and will receive the proceeds. The proceeds, once in the corporate till, will clearly be subject to creditor claims. But insolvency in business is the exception rather than the rule—and the objection of creditor claims is more a thought than a reality.

3. What about corporate accumulations of surplus? This should not cause too much concern. Problems stemming

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What happens to spendable income

If there is no agreement

Corporation Tax (30% on first \$25,000 .	\$ 6,000
Available for Dividends	14,000
Total taxable income to each (salary and dividends)	17,000
Personal Tax (after dividends exclusion and credit)	3,965
	Spendable income to each \$13,035

If there is a criss-cross plan

A & B each have spendable dollars	\$ 13,035
Prem. 3 yr. Exec. (initial)	1,356
	Spendable income to each \$11,679

If there is a stock retirement plan

Corporation pays premiums	\$ 2,712
Available for dividends (from \$14,000) .	11,288
Total taxable income to each	15,644
Personal tax (after dividend exclusion and credit)	3,574
	Spendable income to each \$12,070

Comparison:

Stock Retirement	\$ 12,070
Criss-cross	11,679
	Dollar advantage to each under
Stock Retirement	\$ 391
	or
	Over 25% of the premium amount

from so-called unreasonable accumulations are quite rare. And the comforting language of the Court in the well-known *Emeloid* case, bolstered by the provisions of the new tax law on the subject of accumulations, should dispel this fear.

4. Policy proceeds and stock values: The proceeds might tend to increase the value of the deceased's stock interest; but the parties can handle this to their satisfaction in the stock retirement agreement. This is like worrying about too much money; it should be kept in its rightful place.

The tax factor in stock retirement

Stock retirement has that pot-of-gold look because it can save money for stockholders. Here are some revealing and motivating figures on how Taxes and Spendable Dollars play a big part in the decision:

Take this case: A & B, both aged 40, are equal stockholders, each with an interest worth \$50,000. They each have \$10,000 of taxable income (from salaries,) and the corporation has \$20,000 of profits (see chart at left).

A & B here were in a top personal income bracket of 34%; the corporation was at the 30% level. Just one glance makes it clear that it would be to their economic benefit to have the corporation buy the business insurance they need under the Stock Retirement Plan (see below.) Obviously, there will be a greater proportionate saving where the corresponding figures run larger.

How to estimate which to use

Here are several quick-running rules-of-thumb to apply to the dollar-and-cents picture:

1. If salaries of the stockholders can be increased, and if the personal income tax bracket of the stockholders is lower than the tax bracket reached by the corporation, use the Criss-Cross Plan.

2. If salaries can be increased but if the personal income tax bracket of the stockholders is already higher or would be higher than the tax bracket reached by the corporation because of the increase, use the Stock Retirement Plan.

3. If salaries can't be increased, and if stockholders can't afford to (or, if they don't want to) pay for the premiums personally out of their present spendable income, use Stock Retirement. m/m

SPOTLIGHT ON SUPERIORITY



Portrait of Claes Duyst Van Voorhout by Frans Hals in the Jules S. Bache collection—New York Metropolitan Museum of Art.



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WHAT COMPANY PRESIDENTS LOOK FOR IN EXECUTIVES

held jobs with responsibility	human relations training	sales experience	varied departmental experience
business comprehension	creative imagination	work under capable executive	human understanding
accomplished difficult jobs	personal integrity	company committee experience	emotional maturity



Recruiting executives from outside your firm

Qualified executives are the key to the continued success and expansion of any company. But able executives don't usually just "happen along" when they're needed. A definite plan of selection must be formulated to insure a company an ample number of capable administrators.

A selection plan necessarily involves choosing executives from within the company, and outside of it. Most top executives are groomed for the positions by management development programs. A recent survey by the National Industrial Conference Board showed that executive vacancies are filled by outside personnel in only about 20% of the cases (Figure 1). The practice of outside recruiting is often necessary, however, and methods quite diverse.

Pirating from competitors

The most usual way is by "pirating" from your competitors. Piracy may take several forms. Case history illustrates what may be termed "direct pirating." The president of a Midwest appliance manufacturing and distributing organization was suddenly recalled from his vacation by the unexpected death of his sales manager. The sales manager had been a vice president of the company, and had built up a good sales force and sales program that had helped make the company a contender in its field. A new sales campaign, which had been planned for one of the company's seasonal appliances, and the program had not been mapped.

The president decided to take some very direct and forthright action. His

company's main competitor in the field was a comparatively new company with a rather dynamic sales manager. He had heard nothing but praiseworthy reports about the man's ability, and his own company's sales records often showed the inroads that his competitor's sales program had made. A phone call and an invitation for lunch between the president and the sales manager followed. An attractive boost in salary, plus a participation plan, soon put the president back on his plane to finish his vacation.

Indirect pirating

Indirect pirating is a method which may or may not involve your competitors. The case history of how one publishing company hired its advertising manager will best illustrate this procedure. The publisher of a new magazine had made many contacts in the advertising field. He went to the six top "space" buyers of his acquaintance and told them of the search for a top-notch man. He asked each of them if they would prepare a list of the half-dozen best space salesmen that they had calling on them. In this way the publisher hoped to have a nucleus of a group from which to make his choice. As it turned out, on five of the six lists the name of one man appeared. This man was an advertising manager for a publication in a completely different field. A meeting was arranged. After a lengthy but informal interview, the man was persuaded to take a position with the new magazine.

Wholesale pirating

A third phase of piracy might be termed "wholesale", inasmuch as a large number of likely candidates are given blanket coverage. Take the case of the up-state New York cable and wire products manufacturer. This expanding company had grown to a point where the president could no longer function as its financial officer. A competent controller was needed to relieve the president of his growing and unnecessary burden. Business directories of other companies in the same field were consulted, and a comprehensive mailing list of potential officer candidates was developed. A detailed letter was mailed out to over one hundred prospective controllers that were now holding similar or potentially similar posi-

Methods Used To Fill Executive Vacancies

Method	% Vacancies Filled this way
Pirating (men are hired from other companies)	10
Automatic (able men naturally come to the top)	15
Consultants (candidates are studied, investigated, and recommended by consultants)	10
Compromise (least unlikely candidate is appointed)	5
Merit (men are promoted from within the company on the basis of demonstrated ability and favorable work records)	55
Miscellaneous (nepotism, seniority, politics, etc.)	5

FIGURE 1

tions in other companies in the field. Because of the rigid specifications outlined in the letter, along with any number of otherwise unknown personal problems, there was less than a 20% return to the queries. A thorough review of the qualifications of these men was made, and by a process of elimination, a small number were selected for final screening. Interviews and appraisals finally narrowed the choice down to the most likely candidate.

Advertising for executives

The next general method of soliciting prospects, and probably the most widely used, is advertising. This may take many forms, and may appear in many diverse publications. Display advertising does not necessarily out-pull classified advertising, but rather each position has its own peculiarities of appeal. The trend nowadays is definitely toward the large display advertisement, usually prominent on the business page but *not* in the local newspaper. Usually a national or big city newspaper is used. Advertising in specialized trade publications and in professional journals has also shown a marked increase.

Even regular consumer advertising is now used as a method of executive recruitment. Last month, in the New York Times, a large department store placed a notice for a position open as

manager of a suburban branch. This notice was part of an over-all consumer ad. The advertising trend is definitely showing a diversified approach of trying to reach a potential executive employee wherever he reads.

How personal contacts work

Personal contact with business associates are often another source of capable executives for potential recruitment. Through general business discussions and so-called word of mouth, one often hears of able men who are dissatisfied with their position for one reason or another, or who may be held down in their present positions by internal situations or politics. The Personnel V.P. of a huge western aircraft company found his present Director of Research and New Product Development in this manner. On his weekend golf date at the local country club course, his companion told him of an excellent man in an independent research and testing lab. This man was literally being stifled because of the laboratory's inadequate finances. Thorough investigation of the man's background, with a review of his training and accomplishments, led to his hiring as the aircraft company's new Director of Research.

Personnel Department files

The final, and possibly most rewarding, source of applicants might be your own Personnel Department files. A great many qualified men seeking a change or advancement, often send in applications and resumes to a number of companies. This is general practice even though there has been no announcement of any specific position open. These applications and resumes are often filed just for the purpose of review when positions become available. The personnel director may have already interviewed some of these applicants, and earmarked them as highly desirable employees.

As a matter of fact, reemployment of former employees is also a possible solution to the executive search. In any large company, there is always a number of extremely competent employees who leave for better positions simply because they are moving too slowly in your company. It may be to your interest to investigate their present positions, which certainly should have



new direct-action adding machine

keeps pace with the **FASTEST FINGERS**

See how the Monroe 10-key Model 611 adds up to the speediest figuring yet. Low in cost, this new machine is way out in front in engineering. Its "Ready-Add" open keyboard accepts a new amount while the machine is still cycling. It also does away with key-pile or mis-addition by preventing the depression of one key while another is down.

In other words, this years-ahead machine is engineered for the highest-speed accuracy. It gives you direct subtraction and automatic credit balance. A demonstration will show you how this new Monroe can clip figuring costs. Monroe Calculating Machine Company, Inc. General offices: Orange, N.J. Branches across the nation.

See the **MAN** from **MONROE**
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(Circle 166 for more information)

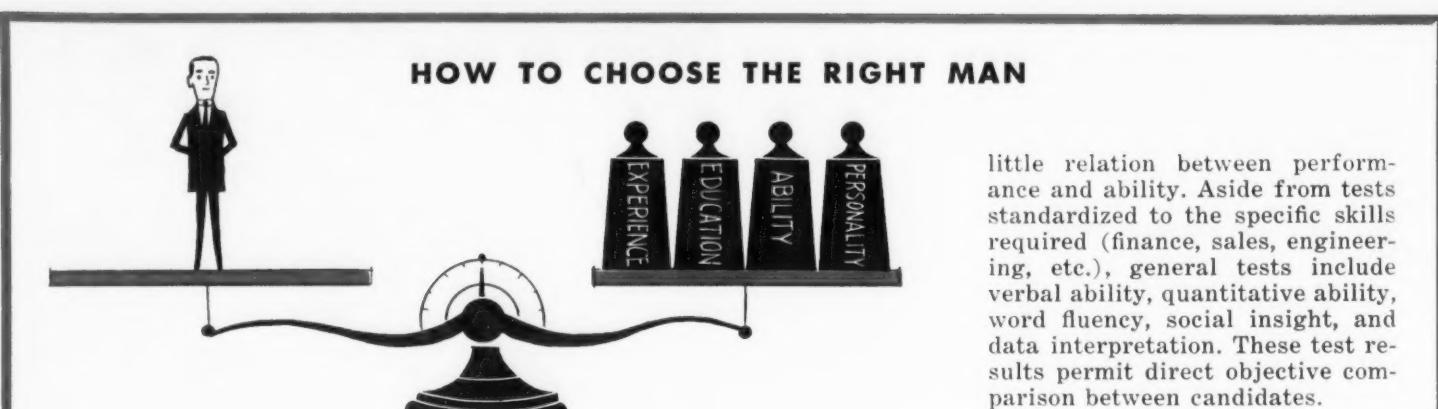
added to their desirability and capability, with the view to interviewing and considering them for rehiring.

Professional executive recruiters

If we consider the foregoing illustrations as methods, then the next step is to examine what might be called the mediums or means of executing or carrying out these methods. If we assume that the president or some other top officer is not in a position to pursue the recruitment search personally, then there are generally three alternatives he can turn to. Probably one of the best is a relatively new type of service organization—the consultant that specializes in the recruiting of executives for specific jobs. Ashton Dunn Associates of New York, an executive recruiting organization, explains their role below in efficiently locating, screening, and selecting executive talent.

The executive recruiter works for management only, and is not an employment agency. The fee for the search is paid by management and no fee is ever accepted from applicants. The recruiter works with the company

HOW TO CHOOSE THE RIGHT MAN



1. QUALIFICATIONS: Compare his qualifications — experience, education, personal background—against a carefully prepared position description. A professionally prepared Biographical Questionnaire Form will help you decide whether his specifications match your needs.

2. INTERVIEW: It is generally conceded that nothing takes the place of the personal interview. These can take several forms. *Interview panels*, made up of the people he will work for or with, are limited because a good candidate might make a poor showing

under this kind of "firing", while a slick, superficial individual might make an excellent impression. The *indirect interview*, a personality appraisal method, creates a situation in which the candidate reveals his past life as perceived by himself. This data is then collated with his written background and judged against the job specifications.

3. APTITUDE AND INTELLIGENCE TESTS: It has been found that factors other than ability influence executive performance. Once a minimum level of general ability is reached, there may be

4. PERSONALITY AND PSYCHOLOGICAL TESTS: These tests measure personality characteristics, emotional stability, etc. The Personality Inventory is probably the most widely used; these usually contain simple questions requiring a *yes, no, or sometimes* response. Other forms include the Pattern-keyed Inventory and the Forced-choice Inventory. Projective tests are also coming into wider use. These might take the form of looking at pictures and making up stories about them, or the more difficult Rorschach ink blot series. Psychological tests are a major factor in determining the ultimate value of a candidate.



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Eliminate Time and Expense of Addressing, also chances for Errors. Paycheck "Outlook" Envelopes are absolutely opaque.

Essential when wages are paid by check. Nothing shows but the employee's name. This improves personnel relations.

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Originators of "Outlook" Envelopes
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(Circle 182 for more information)

in obtaining job qualifications, experience, salary, and all other aspects of the position. Likewise, he also finds out about the company, the potentialities of the position and, if relocation is involved, conditions in the community.

The sources of an executive recruiter are not really greater or better than those described above. However, since his full time job is recruiting, he can often use approaches not normally taken. He can make visits to a man's home during hours when he is at leisure and free to talk. Often this qualified job seeker is able to suggest additional executives who might be "available" but who are reluctant to make their desires generally known. In many cases, the executive recruiter is desirable because he is a thorough specialist working for your best ends.

Two successful recruitments

The following case histories show how Ashton Dunn Associates successfully found two specialized executives. The first man was discovered in a field entirely outside of the client's "line";

the second was located through broad "in-field" coverage.

An executive vice-president was required recently by a large East Coast Specialty Store. The president of the company had spent almost three months searching for the man. He advertised consistently and spread the word among friends, associates, and employment agencies. Almost 80 candidates were turned up, but after endless hours of screening and interviews—by the president—he was ready to give it up as a bad job.

After Ashton Dunn Associates had been called in on the search, it still required another few months to turn up the exact man he was looking for. And he didn't come from the Specialty Store field as you might expect. He was an up-and-coming executive in the mail order business whom they had learned of in the course of a search for another and different client.

Not every search is clear cut. It depends on the individual circumstances and needs of the company. Just a year ago, the executives of a suburban

little relation between performance and ability. Aside from tests standardized to the specific skills required (finance, sales, engineering, etc.), general tests include verbal ability, quantitative ability, word fluency, social insight, and data interpretation. These test results permit direct objective comparison between candidates.

5. PERSONALITY AND PSYCHOLOGICAL TESTS: These tests measure personality characteristics, emotional stability, etc. The Personality Inventory is probably the most widely used; these usually contain simple questions requiring a *yes, no, or sometimes* response. Other forms include the Pattern-keyed Inventory and the Forced-choice Inventory. Projective tests are also coming into wider use. These might take the form of looking at pictures and making up stories about them, or the more difficult Rorschach ink blot series. Psychological tests are a major factor in determining the ultimate value of a candidate.

New York electro-mechanical equipment manufacturer for aircraft concluded three months' of tedious contacts with technical schools and employment agencies in an effort to find a suitable chief for its new products division. Fifteen candidates were located, but none were satisfactory.

The unusual nature of the specifications, which required engineering and administrative skills, combined with the unusual nature of the company's business, made it a challenging search. Here were the specifications:

U. S. citizen able to obtain secret clearance; BS degree in engineering physics; MS degree in business administration or industrial engineering; at least 10 years' experience in broad-gage engineering in hydro-mechanical or electro-mechanical aircraft accessories which required minute examination of drawings and test results, or project engineering on tactical airplanes; wide acquaintance in the aircraft field through technical or professional memberships; knowledge of U. S. military specifications; and an acquaintance with American manufacturing techniques and ma-

terials. The age limit was set between 35 and 45 years old. Salary started at \$15,000 and could go as high as \$20,000 with profit-sharing and retirement-plan elements included.

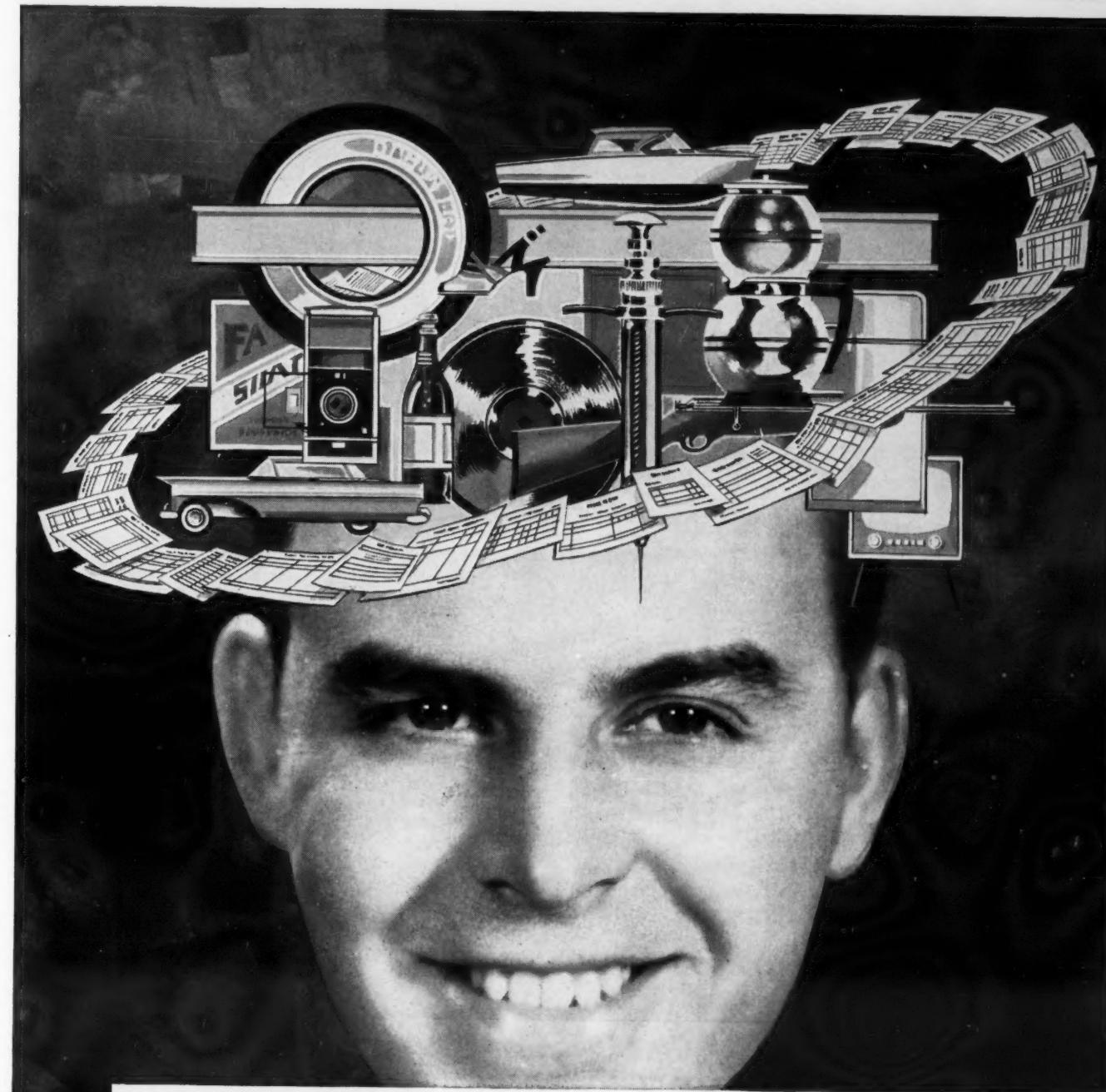
With the specifications spelled out, the first step was a search of Ashton Dunn files, which are carefully cross-indexed according to skills and functions. A special mailing was prepared to key individuals in the 150 companies in the client's field. Graduate placement departments of technical colleges were contacted. Calls were made on personal contacts in the field.

This phase of the search uncovered twenty-seven prospects who were interviewed by recruitment consultants. The prospects' background and experience were discussed with the client. Of these twenty-seven, three were selected to be interviewed, and one man was selected as being the outstanding candidate. He was called back for two additional full-day visits with the client at his plant, and met the rest of the executives of the concern. He was offered the position, and started work early last summer. A recent check-up revealed that both he and the client are eminently satisfied with their respective decisions.

Using employment agencies

Employment agencies are probably the most commonly used medium. They service a wide number and variety of companies, and are a reliable source. However, they are usually not as equipped as a recruiter to pursue so thorough a program. There is also the possibility of a two-fold allegiance that an employment agency might feel: duty to the applicant as well as the company. Even in the case where the company pays the fee, there may often be a feeling that the agency is in a competitive position with other agencies, and must place someone just for the sake of the placement fees. In the case where an agency acts as an exclusive supplier to a particular company, of course, this situation cannot arise.

The Personnel Department of your company can also act as your agent in selecting, screening, and interviewing candidates. Although most personnel departments are set up for lower level hiring, the experience of your trained personnel can often be most rewardingly utilized. m/m



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\$28,000 a year, an annual return of more than 53% of our investment.

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In your business, too, National machines will pay for themselves with the money they save, then continue savings as annual profit. Your nearby National man will gladly show how much you can save—and why your operators will be happier. (See yellow pages of your phone book, or write to us at Dayton 9, Ohio.)

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diagnostics

FOR MANAGEMENT

Further development in organization planning

Activity Analysis

by Leslie M. Sloté

*Director of Industrial Relations;
Norden-Ketay Corporation, and
Management and Labor Relations Consultant*

In the article entitled "Why Organization Charts Don't Work" (March, 1955) we explained the activity analysis approach to Organization Planning. We showed that management's job has to be defined by function, and not title, in order to get results. The activity analysis chart illustrated then covered a broad function at a high level. In effect, it was the story of an enterprise itself. Readers have been inquiring whether activity analysis is useful further down in the organization, and if so, how would it work within a department at the clerical level.

Since activity analysis is a means of analyzing all corporate activities or functions, it can be applied successfully at every level from top to bottom. Our present example illustrates some of the detailed steps in a simple voucherizing procedure for payment of vendors' invoices. We have gone into sufficient procedural detail to show how such a chart

ACTIVITY ANALYSIS CHART

Administrative Goal				Over-all Coordinating Responsibility		
Actions Required				Delegated responsibilities		
Ref.	Basic Functions	Reference	Sub-Functions	Dept.	Echelon	Position
1	Process vendor invoices	1.1	Receive and sort Accounting Dept. mail	Accounting	A/P section	A/P Supervisor
			Segregate new invoices, corrected invoices, credit memoranda, vendor correspondence, etc.		Office Services section	Mail clerk
			Deliver 1.11 to A/P section		" "	" "
			Receive and stamp invoices		A/P section	A/P clerk
			Distribution advice stamp on original		" "	" "
			All duplicate copies stamped: "Duplicate—Do Not Pay"		" "	" "
			Check invoice item, price, and quantity against yellow copy of Purchase Order		" "	Comptometrist
			If O.K., to comptometrist for checking extensions, discounts and totals		" "	A/P clerk
			If not O.K., check with Purchasing Dept., get written approval		" "	Correspondence clerk
			If communication with vendor necessary, phone or write, and follow-up		A/P section	A/P clerk
			Follow-up on 1.33		" "	" "
			Initial invoice when O.K.		" "	" "
			Check Receiving and Inspection Report (MC-33) against invoice		" "	" "
					Materials Control, Inspection, and Accounting Dept. responsibilities divided as shown below.	
2	Process "Receiving and Inspection" report	2.1	Purchase Order, blue copy, filed alphabetically by Vendors' name and P.O. # sequence under each name	Materials Control	Receiving Section	File clerk
			Upon receipt of purchased material, physically verify quantity (count, length, weight, etc.) against packing slip and Purchase Order copy		" "	Receiving clerk
			2.21 Mark quantity received on P.O. copy		" "	" "
			2.22 Make out Receiving and Inspection Report in triplicate (Form MC-33) and sign		" "	" "
			2.23 Distribute copies as follows: copy 1 (white) to Inspection Dept. 2 (pink) with material packing slip copy 3 (yellow)—Receiving Section file copy		" "	" "
			2.3 Physically verify quality of purchased material (dimensions, materials, finish, color, etc.) against specifications		Inspection	Incoming Material Section
			2.31 Inspection results and signatures on copy 1 and 2 of Form MC-33		" "	" "
			2.32 If O.K., copy 2 and material to Stores Section		Inspection	Incoming Material Sect.
			2.33 If rejected, copy 2 and defective material to Shipping for return to Vendor		" "	Materials Handler
			2.34 If rejected and to be reworked in Shop, copy 2 and defective material to Materials Review Analyst		" "	" "
			2.35 If part O.K. and part rejected, acceptable material as 2.32, unacceptable material with red rejection tag (Form MC-40) as 2.33 or 2.34		" "	" "
			2.36 Copy 1 of Form MC-33 to Acctg. Daily collation of "Receiving and Inspection" Report (MC-33) with Vendor's invoice		Accounting	A/P section
					" "	File clerk A/P file clerk
3	Issue Debit and Credit memoranda to Vendors			Accounting	A/P section	A/P Asst. Supervisor
					A/P section	A/P Supervisor
4	Conditional payment of invoices prior to inspection					

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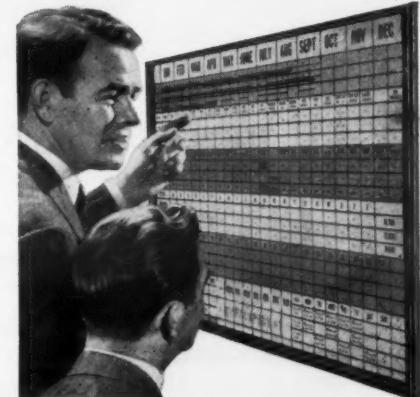
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(Circle 163 for more information)

is actually worked out in detail.

In rough outline, the chart looks like a "T" account. Above the heavy horizontal line, on the top left, we have established an administrative goal, and immediately opposite this on the top right, we have assigned the over-all co-ordinating responsibility for attainment of this goal. Note the heavy vertical line in the chart which separates it into two parts. The left hand side should be filled in as a complete, detailed flow procedure of all the steps in sequence (i.e. functions and sub-functions) required to accomplish the administrative goal. The right hand side opposite each step assigns the specific responsibility for that function by position title.

Remember that the titles in themselves are unimportant—the assignment of each step to an individual who is then responsible for performing that step, is the important thing to grasp. However, before making any assignment of responsibility on the right hand side, first make sure that *all* steps of the procedure are listed on the left. Check for such things as omissions, duplications, and unnecessary or incorrect steps in the procedure.

After everything is listed, and you start to make assignments of responsibility in cooperation with the appropriate line supervisors, you will probably come across situations in which you don't know to whom you can make work assignments. Here is another useful aspect of our chart. It points up *voids* in the continuity of assignments, and *forces* decisions to be made in order to carry out the administrative goal. Such voids often occur when you cut across departmental lines, which is characteristic of most systems and procedures. The solution is best worked out in cooperation with the department heads involved. Occasionally, a new position has to be created to carry out assigned responsibilities.

The activity analysis chart will be especially useful in working out procedures in relation to EDP, such as applicability and cost surveys, installation and pilot studies, programming, etc. The required procedural flow can be clearly outlined for presentation to top management, and at the same time will show assignment of responsibilities for carrying out the project. It is an excel-

MANAGEMENT METHODS

lent selling tool, because it points up the necessity for new positions, or may even dramatically show voids, and indicates to what degree current personnel will be involved.

Referring to the chart illustrated, note that even though we are discussing an Accounting Department procedure, we have to assign some steps or responsibilities to other departments, such as Materials Control and Inspection. However, the over-all responsibility for the entire procedure belongs to the Division Controller as shown.

Another useful advantage of activity analysis is the *position descriptions* that automatically follow as *by-products* or *end results*. This is accomplished by taking a duplicate copy of the chart, cutting it up horizontally into a separate strip for each step, and then sorting all the strips by *position titles*. Next, head up a separate blank sheet of paper with each position title, and paste the sorted strips in sequence under the appropriate titles. You will then have a *realistic* position description for each title, showing the exact responsibilities of that job, and how they are to be accomplished. It is excellent for instruction purposes, and will be a *complete* description for each job after all the relevant activity analysis charts have been cut apart, sorted, and pasted up for use.

To summarize, the objectives of enterprise are accomplished through activities or functions assigned to and carried out by people. Therefore, a logical and practical planning approach for establishing the functional organization structure of enterprise is through the activity analysis chart, which is equivalent to *functional flow* plus *delegation*. In essence, it sets forth an objective, the flow of steps in sequence necessary to accomplish that objective, and at the same time, completes the picture by making specific assignments of responsibility to complete each step. **m/m**

**Want to speed up
maximum use of
electronic office equipment?
see page 43 for details about the all new
WORKSHOP FOR MANAGEMENT**

FEBRUARY 1956



to keep planes on schedule before they fly

Operation sheets—purchase specifications—manufacturing and assembly schedules. These are typical of the paper-work needed to keep plane manufacturing moving along on schedule. Most of the leading plane manufacturers use A. B. Dick duplicating products to meet this requirement.

Of course, it's quite possible that you are not a manufacturer of airplanes. But if you have use for clear sharp copies of written

and typed material, or copies of drawn and ruled forms, you will find it worthwhile to talk with an A. B. Dick Company distributor. He has full information about all four major duplicating processes—mimeograph, AZOGRAPH, spirit and offset. You will find his name listed under Duplicating Machines in the classified section of your phone book. Or write A. B. Dick Company, 5700 Touhy Avenue, Chicago 31, Illinois.

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Convenient Rudd-Melikian coffee dispensers are a valuable production tool. Efficiency goes up, accident rates go down. Delicious, 100% pure Kwik-Kafé finds favor with employees—helps them keep alert on the job in offices or plants of every size. Hot chocolate and a variety of other beverages available.

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Please send me a copy of booklet 15B explaining how to control the coffee-break with R-M dispensers.

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Firm.....
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City..... Zone..... State.....

(Circle 140 for more information)

How to use consumer to sell a product

QUESTION: Most public relations experts consider their work to be an adjunct to advertising and selling. Do you really believe publicity can sell a product by itself?

ANSWER: Yes. Any publicity man can reel off dozens of cases in which his efforts have been directly responsible for substantial sales. In fact, as far as I'm concerned, no publicity is self-liquidating unless it can be merchandised to produce sales. But this isn't always the case—even when the public relations job is good.

QUESTION: That sounds contradictory. How can you do a good publicity job, according to your "self-liquidating"

standard, and not produce sales?

ANSWER: The mere appearance of a good publicity story doesn't guarantee sales. The publicity must be merchandized. By that, I mean using the publicity, before and after it appears, to stimulate salesmen's enthusiasm, or to build company prestige among dealers, or to increase product recognition among consumers. Merchandising, in this sense, means getting good ammunition to the people selling your product.

QUESTION: How do you go about merchandising a particular story about your product? What is the most common technique?

ANSWER: Reprints of an article, or even

bulk copies of a magazine in which you get a spectacular splash, are a good example. You should send these to every salesman, distributor or dealer. If you have a company house organ, plug it there. If you know enough about the article in advance, you can send out pre-publication sales bulletins. And even after the article has appeared, case histories can continue to remind the sales organization of ways the publicity helped increase sales. Some companies even take paid newspaper space to reprint or point up a really favorable piece of publicity.

QUESTION: Then you can't count on sales to come pouring in after a good "news break" without any merchandising effort?

12

WAYS TO CREATE NEW HOOKS FOR PUBLICITY

Giveaways. TV programs are hungry for free prizes at all times.

Anniversaries. The anniversary itself isn't news but it offers a timely peg for "introducing" new models, new packaging, merchandising deals, new ad themes, etc.

Exhibits. A girdle manufacturer assembles a collection of undergarments through the ages; a lock manufacturer collects antique locks. Exhibits related to the product, and of genuine interest to the public, can be used throughout the country, make good feature material.

Booklets. Most companies can sponsor at least one "service" booklet to be mentioned by the press and sent for by the public.

Example: an antenna manufacturer's guide to selecting the right antenna for different locations. Booklets make good dealer giveaways, too.

Sales meetings and conventions. A vehicle for announcements, demonstrations, etc. A sewing machine manufacturer got interesting photos of a group of salesmen whipping up their own shirts to prove ease of operation at a sales meeting.

Predictions. The president of an appliance company announces a projected innovation which will revolutionize his industry; an electronic manufacturer says he'll make a device to unscramble closed circuit TV; an atomic scientist names peacetime ap-

plications. Many companies have experts whose valid predictions may well make news for different publications.

Contests. Particularly good at local levels where winners can make copy for their own newspapers, radio and TV stations—with an eye to the national winner and what you can make of him.

Research results. Motivation, opinion, sampling, or statistical research stir up many provocative, interesting stories related to the product.

Personalities. Find an individual who, by vocation or avocation makes good copy that can be related to the product.

by Rene Schenker,
Vice-President, Ruder & Finn Associates,
New York City

publicity

ANSWER: It does sometimes. But you can't and shouldn't count on publicity to sell. Many companies still seem to be chasing that potential "big break" that they think will automatically put a product over. It takes more than that. I recall a pipe manufacturer whose sales remained static after a five-page picture story in a top national weekly. Management simply sat back and waited for a deluge. It made no effort to convert the story into a sales tool which might have won bigger orders, better counter space, and more window displays from the dealers. In fact, they never even told the salesmen of the article's existence! I maintain that careful, *constant* merchandising of lesser breaks can do as good a job as the isolated, one-time bonanza. A sales organization which receives a steady stream of publicity clippings will feel the company

Props. Photographers; window trimmers; stage, movie and TV set designers, and newsreel cameramen need props all the time. If it's inexpensive enough, give your product as a permanent gift. If not, circularize these sources with product photos and try to arrange for more speedy deliveries and pickups.

Seminars. Company-sponsored seminars on subjects related to the product attract such newsworthy assets as big names, new ideas. For example, a lighting manufacturer held a lighting seminar attended by a well-known architect, decorator, lighting engineer, and trade paper editor. Their thoughts on the subject made news.

Stunts. Just make sure they have something to do with the product—and that they're legal.

APPLYING RECORDAK MICROFILMING TO BUSINESS ROUTINES—NO. 14 IN A SERIES

More than a million credit checks a month . . .

but filing them this way is a snap



General Petroleum Corporation—the Socony-Mobil affiliate in the far west—cuts billing costs approximately 50% by photographing credit checks in a Recordak Microfilmer

In one minute the girl at the Recordak Microfilmer can file more than 300 credit checks on film.

This fast, low-cost operation allows many short cuts. Some, no doubt, might well be applied to your own routines.

Cuts paper work. Photographing the original Mobil credit checks eliminates the need for the carbon copies formerly kept as the office record. (The originals, as before, are returned to the customer with his bill.)

Handling only one paper record for every purchase—instead of two—saves time all along the line. For example, four days a month were formerly spent cleaning out drawers and labeling storage boxes.

Turns file space into office space. A year's supply of

credit checks—on Recordak Microfilm—are now filed at the finger tips in four file drawers instead of in 1800 large boxes. A space saving of at least 98%.

Eliminates "can't find's." Now, when customers ask to see past records . . . they can be located in a matter of minutes, and viewed—or duplicated—in a Recordak Film Reader. Since the adoption of Recordak Microfilming there hasn't been a *single* case of a ticket not being easily found.

Permits centralized accounting. Branch offices now forward credit checks to home office where dual microfilm copies are made simultaneously—one set for branch. *Despite a three times' increase in ticket volume in recent years same staff easily handles the job!*

"Recordak" is a trademark



"SHORT CUTS THAT SAVE MILLIONS"

This valuable free booklet shows how Recordak Microfilming is cutting costs for over 100 different types of business . . . thousands of concerns.

RECORDAK

(Subsidiary of Eastman Kodak Company)

Originator of modern microfilming—and its application to business routines

— MAIL COUPON TODAY —

RECORDAK CORPORATION (Subsidiary of Eastman Kodak Company)
444 Madison Avenue, New York 22, N. Y.

Gentlemen: Please send free copy of "Short Cuts That Save Millions" F-2

Name _____ Position _____

Company _____

Street _____ City _____ State _____

(Circle 136 for more information)

is in there plugging for them all the time.

QUESTION: You mentioned the idea of merchandising a publicity break before it occurs. Does it often happen—that you know in advance?

ANSWER: About half the time. There's no way of knowing what will come of a press release, but you can really do a job with a magazine feature if you have worked with an editor and know it's going to appear. For example, when a major article on one of its executives was to appear in a national magazine, Tupperware Home Parties, Inc., manufacturers of plastic housewares, started work months in advance. Dealer recruiting is Tupperware's prime sales problem, so they sent out special mailings to dealers, and peppered sales bulletins with repeated references to the article. Reprints were rushed out at the first possible moment. Flyers and pencils carrying the story title, date, etc. were used. Then Tupperware took newspaper ads in 90 cities to announce the story. The campaign worked. A flock of new dealers of such high calibre were added that three became top distributors within nine months time.

QUESTION: Do publications ever object to having their articles quoted for sales exploitation?

ANSWER: In most cases they welcome and encourage it. They get publicity that adds ammunition to their own advertising and readership claims. In the few instances where magazines prohibit use of their reprints for sales purposes, you can almost always extract portions to be put to effective use for your firm.

QUESTION: Can you merchandise TV or radio publicity where you don't have a printed page?

ANSWER: Definitely. First of all, try to arrange in advance for still pictures and a monitored script. These are your only evidence of a TV mention—but they both make excellent mailing pieces. If the show is a big one, it doesn't hurt to give the wire services a photo of your product or personality posed with the star. If you can be sure of a date in advance, alert your customers, salesmen, dealers, or distributors—even arrange meetings timed to catch the show. Incidentally, TV publicity is merchandised best at the local level. For example, a leading men's shoe manufacturer recently ran a city-by-city campaign in

Prevent "Mobile Mob" distractions



(Circle 152 for more information)

with new VMP Mobilwall Jrs.!

New install-them-yourself office partitions create privacy, channel traffic, increase efficiency—at low cost!

A fast new way to bring office order out of chaos is with low-height, low-cost VMP MOBILWALL Jrs. These attractive steel partitions create peaceful private offices and work areas, require no high-cost carpentry and plastering. High enough for privacy, low enough for ample air flow, VMP MOBILWALL Jrs. are the answer to an office planner's dream.

MOVE EASILY AS FURNITURE. VMP MOBILWALL Jrs. are adaptable and interchangeable to meet

any future floor plan. They are made in three heights (42", 54", 68") and in widths from 9" to 66". Steel, glass or plastic top panels can always be added, or removed.

Think how much "Mobile Mob" distractions cost your firm each day. Then do something constructive about it—by installing new VMP MOBILWALL Jrs. They pay for themselves by immediately increasing worker efficiency, reducing clerical mistakes, improving customer service!



SMART AND STURDY! A new low-height version of famous ceiling-high VMP MOBILWALLS, the Juniors improve an office's appearance as well as its efficiency. Colors are attractive; baked-enamel surfaces wash clean with soap and water—look new for years!

WRITE Dept. MM-2, for descriptive folder showing all sizes and styles of VMP MOBILWALL Jrs.—along with before-and-after "ratio-delay" study facts showing how definitely VMP partitions improve office efficiency. A list of VMP representatives will also be included.

Virginia Metal Products, Inc.
ORANGE, VIRGINIA
Subsidiary of Chesapeake Industries, Inc.
(Circle 152 for more information)

which its local dealers were guest speakers. The company sent its other stores accounts of these appearances. The whole program not only boosted local sales, but stimulated salesmen's enthusiasm. TV and radio stations, like publications, are usually happy to cooperate with promotions which publicize their programs.

QUESTION: Incidentally, while we're on TV and radio, how does a company go about getting its product or people on programs?

ANSWER: In the same way you get stories printed: by offering material the programs can use. Maybe your product can fit as a giveaway or a prop, or possibly you have an expert who'd make for a lively interview. Maybe you can supply an exciting demonstration, or, be of help in a charity or civic cause. This is the publicity man's job—to dig out the ideas.

QUESTION: So far, we have talked chiefly about merchandising the publicity. Do you have any general suggestions on how to go about landing publicity in the first place?

ANSWER: If you're lucky enough to have a "natural" product or personality, publicity is a relatively routine matter of informing media of its presence. Here the danger is often in sacrificing your story to the first bite, rather than contriving for the best possible coverage. On the other hand, if your product or message wouldn't arouse an editor from his after-lunch nap, you'll require more imagination, ingenuity, and know-how.

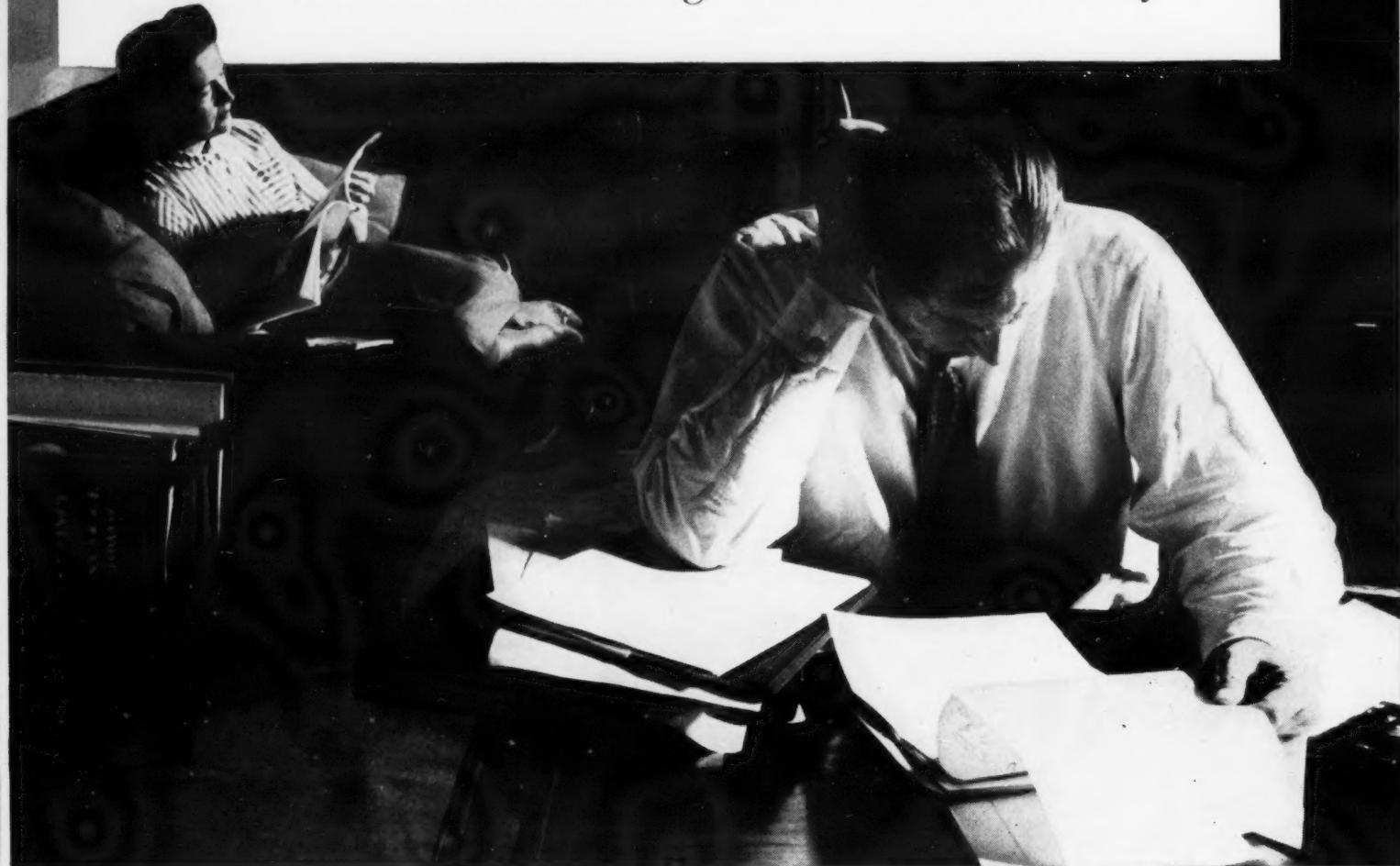
QUESTION: What's a "natural"?

ANSWER: In a product, something that's unique—or something that's self-identifying without necessarily being unique. A good example of the latter is the Skotch Kooler. When this distinctive thermos jug turned up in scores of editorial photos of picnics and beach parties, and even in other companies' paid ads, it never needed a label for identification. Unfortunately, this happy advantage usually doesn't occur with a typewriter, or bathtub, or electric bulb.

QUESTION: How do you inject life into an old product that isn't a "natural"?

ANSWER: By creating news that will be of genuine value to the editor or TV program director. This is the very essence of publicity. If you dig hard enough, you're

The Walkers are celebrating their 25th Anniversary



Through the years Linda Walker has paid through the nose for setting her wedding date so close to end-of-the-month. On every anniversary since he became plant manager, Jack has had to work late.

That's because his modern, decentralized company still clings to inadequate, old-fashioned accounting procedures in its branches. Figures for 30 days of operations have to be boiled down at the last minute. Before a report can be sent off (generally late) to General Offices, Jack and his whole staff have had to burn a lot of midnight oil.

Yet he and Linda could be on the dance floor right now — with the aid of Keysort

punched-card accounting. By processing figures every day, Keysort eliminates some of decentralization's biggest bugs. Daily and weekly reports show plant manager and department heads where they stand *now*. End-of-the-month is like any other day . . . without rush, overtime or hurry-up calls from top brass.

A McBee Keysort installation can give you comprehensive, accurate reports on every phase of factory operation—*fast*. Whether you run a manufacturing giant or a 100-man branch plant. At low cost.

The McBee man near you can show you how it's done. *It will take him just one hour.* Phone him or write us.

McBEE  **KEYSORT®**
Punched-card accounting for any business

Manufactured exclusively by The McBee Company, Athens, Ohio • Division of Royal McBee Corporation
Offices in principal cities • In Canada: The McBee Company, Ltd., 179 Bartley Drive, Toronto 16, Ontario
(Circle 130 for more information)

bound to find a newsworthy "hook." (See box) For example, the American Safety Razor Co. has employed, for 25 years, an expert on "pogonotomy" (the art of shaving.) Informed of this unusual occupation, a prominent wire service feature writer interviewed him, and wrote a story which went to newspapers all over the country. ASR was so delighted, it got permission to reprint it in over 70 newspaper ads.

QUESTION: We have been discussing product publicity. How about the job of "selling" an individual—does that differ from what you've described?

ANSWER: Basically, no. Professional men like lawyers, CPA's, insurance brokers, engineers or architects, all under rigid restrictions against advertising and other direct methods of soliciting accounts, can use publicity to obtain business. The late J. K. Lasser, whose name was virtually synonymous with Certified Public Accounting, is a good example of this. Let's illustrate further with Mr. X, a prominent broker I know. When invited to do a trade-paper article on his specialty, he often asks clients or prospects for material. When the article (or book) appears, he sends them a copy with a note of thanks. He also maintains mailing lists to which he sends reprints accompanied by short, low-pressure notes. On the strength of his writings, speeches, or radio and TV appearances, he is sought for interviews—another source of clips to be passed along to colleagues and clients. He also sends out booklets regularly which cite developments in his field. Like any good merchandising campaign, these mailings have the benefit of continuity. Naturally, this activity has paid off for him.

QUESTION: Would you say that ALL publicity can be put to sales use?

ANSWER: Yes. Of course it's good policy to seek publicity you know can be merchandised, but you can always take what publicity you do get and tailor it to your sales needs. I can think of one company which effectively merchandised publicity that never even appeared! A home appliance manufacturer with no new model—not even a new dial—to promote, hit on the idea of awarding a citation to the publication which ran the best spring cleaning article that year. Photos of the award ceremony—showing manufacturer and publisher—were never used by anyone, not even the publisher who won the award. But those photos made splendid sales promotional material in salesmen's dealer presentations.

MANAGEMENT METHODS

a new title: ADMINISTRATIVE MANAGER

by Robert E. Shull
Administrative Mgr., Fine Chemicals Div.
American Cyanamid Company

A new organizational pattern involves the use of an "administrative manager" for certain coordination functions. Building a new organization from scratch offers an opportunity to work out an organization based on the job to be done and the people available to do it. The groupings of functions in Cyanamid's new Fine Chemicals Division, although not common, illustrate organizational principles that can be applied in any company.

The responsibilities of the division's administrative manager are broadly defined as all functions that are not specifically sales, technical, plant, and accounting. They involve products, services, control, and other administrative functions.

His administrative functions

The products functions include production planning (broad phasing of production to meet sales and inventory requirements); inventory planning (of total finished products inventory, including in-process inventories of products and raw materials and packing supplies inventories at the division's own plant); product distribution (seeing that the inventory of finished products is at the proper locations to service customer needs); and collecting, coordinating, and analyzing of pertinent data for price establishing. Under the service function come order processing, sales recording and reporting, sales forecasting, and secretarial service.

Principal control functions include preparation and presentation of the divisional financial budget and supplementary requests for budgetary authorization; development and issuance of periodical control reports on various phases of divisional operations; and authorization of payments.

Other administrative functions illustrate the distinction between divisional and central staff responsibility. The administrative manager's staff develops procedures that are related only to the division, related standard instructions, and rough drafts of related forms; issuance of the standard instructions and the final preparation, reproduction, and stocking of the form is a function of the central procedure department. With regard to personnel matters, the administrative manager acts as the personnel contact between divisional operating people and the central procedure planning and personnel staff. That part of the function required to give uniformity in the company is performed by the central staff.

Principles of organization

Although no organization plan is directly applicable to any other firm, the basic principles apply everywhere. These basic principles are as follows:

1. The use of an independent body to correlate diversified interests.
2. Assigning related functions to one person in order to assign definite responsibility and authority.
3. Assigning functions to individuals having the greatest interest in them.
4. Assigning administrative functions to an independent body to avoid diverting operating attention from the operating function.
5. The "states right" concept applied to operating divisions.
6. Preference for local rather than absentee supervision or direction. m/m

This is an excerpt from a speech at the American Management Association Office Management Conference.

"This machine reduces our unusable punch card loss from 10% to 1%!"

CUMMINS Cardioners Straighten Crumpled Edges, Flatten Warped Cards, Iron Out Creases, Preserve Exact Original Dimensions!

Before Equitable Trust Company installed their Cummins Cardioner, approximately 10% of the punch card type checks received could not be run through tabulating, sorting machines because of damage. Their new Cummins Cardioner reduces rejects to less than 1%... and, they now handle punch cards in one quarter of the time!

This is a typical example of how the Cummins Cardioner can help you get the most from your punch card equipment, in both added efficiency and in all the numerous uses for punch cards—payroll checks, money orders, statement forms, requisitions, reply cards and product tags, to mention a few.

The Cummins Cardioner actually reconditions damaged punch cards that will not go through tabulating, sorting machines—any make. It renews the entire card, including both long edges. Creases, crumpled edges disappear; original length is re-established. Cards damaged beyond repair, and those bearing foreign objects such as paper clips, staples, adhesive stamps and mending tape, are sorted out and collected in a separate bin for hand inspection.

This new "running mate" to your tabulating equipment handles 51, 80 and 90 column cards... automatically... up to 275 cards a minute! The Cardioner—like Cummins Check Signers, Endorsers and Perforators—is designed to help you keep abreast of the latest developments in your business. Contact your Cummins representative... listed in your classified telephone directory.



SEE FOR YOURSELF... get your free copy of this detailed new catalog describing the Cummins Cardioner.

SALES AND SERVICE IN ALL PRINCIPAL CITIES



Cummins IN BUSINESS AND BANKS SINCE 1887

CUMMINS BUSINESS MACHINES
Division of Cummins-Chicago Corporation
4740 North Ravenswood Avenue, Chicago 40, Illinois

(Circle 116 for more information)

A REPORT FROM THE BUREAU OF STANDARDS

Established applications for electronic business equipment

by Dr. A. V. Astin, Director National Bureau of Standards

EDITOR'S NOTE: During the recent joint Congressional investigation of Automation, one of the most useful and cogent pieces of testimony was provided by Dr. A. V. Astin. Because of its length, it was inadequately reported in the press. While space does not permit this magazine to present the full transcript of his remarks, we have excerpted below sections dealing with computer applications in the U.S. Government which we feel will be of special value and interest to businessmen.

The goal of mechanization is increased productivity, and increased productivity is, I believe, an objective of primary concern to our Nation. Although I am not an econ-

omist, it is my understanding that the nature of our economic system is such that it must expand in order to remain vigorous and healthy. In an era when the opportunities for geographic expansion are almost nil, the only practicable means of expanding our economic system is through the development of new products or through the development of techniques for producing products more efficiently. Both of these depend on scientific and technological effort, involving continuing emphasis on mechanization in all of its phases.

A recent analysis by Dr. Raymond Ewell of the National Science Founda-

tion shows that the productivity of our labor force, as a result of scientific and technological effort, has increased at a rate over 2 percent a year for the past 43 years. His analysis also shows the productivity rate to be accelerating—it was 3 percent over the past seven years. The dependence of our increasing productivity on science and technology can be further demonstrated by the fact that approximately half of our labor force is now engaged in producing or marketing materials or devices that were unheard of 50 years ago.

An important characteristic of an expanding economy, dealing with new

The consequences for management of electronic business techniques

From a talk by James C. Worthy, former assistant Secretary of Commerce

" . . . It is a fact of great significance that the number of clerical workers has increased more rapidly than the number of productive workers during the past half century. Modern productive techniques, with their consequent centralization of direction and control, require increasingly greater proportions of paper-processing personnel. . . . Unless current trends can be halted or reversed, an ever larger and larger portion of the nation's total manpower will necessarily be absorbed in unproductive record-keeping overhead at the expense of wealth-creating effort.

"The technological response to the current challenge is already clearly indicated. The development and refinement of electronic data-processing systems offers the same possibilities to business that it does to science and to government. And the end results can be similar: a greater concentration of available human resources on the production of tangible goods and services and a smaller proportionate loss to non-productive overhead.

"As in the case of government personnel, this development will not lead to large-scale displacement of employees. The process will be gradual and permit ample opportunity for orderly adjustment. Over the long pull, it will result in the gradual diminution of monotonous, repetitive paper-handling work. At the same time, it will gradually increase the

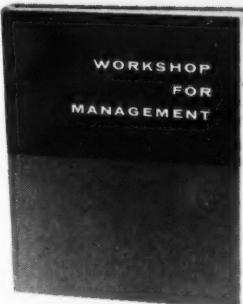
opportunities for interesting, creative high-skilled technical assignments. The consequence will be not only greater gains but higher human satisfactions.

"The consequences for management are equally significant. One of management's greatest problems is that of securing adequate and timely information on which to base day-to-day decisions. The complexity of modern business organizations has created chains of command that often isolate the decision-making group at the top from the basic facts which are essential for effective, timely control. Paradoxically, it is also true that top management may be literally swamped with undigested facts and with figures too voluminous to use. One of the important gains from the new electronic techniques will be the bringing of the right facts to the right people at the right time. . . .

"Every day, new and divergent facts develop which those in responsible positions in government and industry must carefully consider and analyze. These mountains of data will surely overwhelm us if we continue to follow the practices of those who lived in a simpler time. The electronic computers with their remarkable ability to assimilate and store information for rapid selection and access may be a primary factor for sound, wise public and business policies in the troubled years ahead."

AMERICAN
Lithofold Corporation
500 BITTNER ST. ST. LOUIS 15, MO.

Shows how to profit
at every stage of
**ELECTRONIC
OFFICE
OPERATIONS**



the all
new 1956
edition

WORKSHOP FOR MANAGEMENT

Use this new book to see how more than thirty top executives and management consultants save time, money, and personnel with electronic office systems.

Each method, each application has been proved in practice. You learn exactly how to get the results—how to eliminate the mistakes that other companies experience in their own electronic office operations.

From "giant brains" to the smaller electronic systems—**WORKSHOP FOR MANAGEMENT** gives you ready-to-use information that gets most effective use from electronic equipment like UNIVAC, BIZ-MAC, IBM 650, and the BURROUGHS E101.

Partial Listing of Contents

- ★ How to get maximum savings with electronic office equipment
- ★ How to organize your company for an electronics operation
- ★ How to speed up effective use of electronic office procedure
- ★ What to expect in performance from electronic office systems
- ★ How to staff for electronic office operations
- ★ How to solve the personnel problems involved in using office electronics

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Name
Address
.....

products and new techniques, is that it must be accompanied by an expanding science. New problems must be solved which are always larger and more complex. It is in coping with such a situation that the new automatic computing machines assume major significance. Many of the scientific and technological advances which have been made with the use of these machines would have been either impossible or excessively costly to achieve without them. Modern guided missiles and the hydrogen bomb provide two outstanding examples. *To date, our experience with these machines shows that they are not used primarily to do old work with fewer people.* Instead we are tackling the important new problem with the same or even more people, thus increasing our capacity to explore the unknown. Viewed in this light, the recent developments with computing machines help to fulfill the current need of science and technology. Advances have now reached a stage where further progress would be impracticable without them.

The utilization of modern high-speed computing machines has, so far, been mainly in the field of science and technology, especially in those areas important to our defense effort. It is extremely likely, however, that their ultimate major use will be in the field of office operations for both government and business. In this area, we now find a situation somewhat analogous to the state of scientific technology before the advent of these machines. Office operating problems have reached a size and complexity that can fast become a barrier to further efficiency and growth unless there is provided better means for handling the masses of information which clog modern offices. . . .

Our Federal Government has the largest office operations in the world. Hence, it seems logical that if modern data-processing machines have a place in improving the efficiency of large-scale office operations, there should be numerous possible applications within the Federal Government. Our experience has shown that this prospect is indeed very good.

The advisory and consulting services of the National Bureau of Standards have led to a need for keeping abreast of all major developments involving



Kentucky Division of Publicity reports:

**"25,000 prints in 20 days with two enlargers
and 'Velour Black'"**

Chances are your photo lab won't run into an overload like that. But every photographer knows what RUSH means. And then he needs a paper that gives highest-quality results in minimum time. That paper is Du Pont Velour Black®.

Jim Warren, Senior Photographer in the Publicity Division of the Commonwealth of Kentucky, says, "We have only two 4 x 5 enlargers to handle our printing. And, because our prints go to professionals for reproduction in magazines and newspapers, they have to meet high-quality standards. Without Du Pont 'Velour Black' photographic projection paper, we'd never be able to meet our deadlines."

"Quantity printing demands a paper with lots of speed, range and latitude, and one that doesn't curl. That's why we've used 'Velour Black' photographic paper for all our state publicity kits since 1953."

"In addition to 8 x 10's for our kits," continues Mr. Warren, "we also make hundreds of 16 x 20 exhibition and display prints. For these we use Du Pont Warmtone exclusively. Its tone and ease of handling can't be beat!"

The Photographic Section is a part of the Kentucky Department of Conserva-

tion. It serves all state agencies and supplies hundreds of publicity photos to publications and associations. Its staff of four photographers, who also double as darkroom men, know how valuable Du Pont papers can be when standards are high and deadlines are tight. When ordering, they specify Du Pont "Velour Black" and Warmtone—no substitutes are accepted!

Just mail the coupon for more information about Du Pont photographic papers.



DU PONT Technical Representatives Ray Stuart and Norman Cutler discuss printing with Senior Photographer Warren (right). Our representatives are always ready to help in solving special problems.

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PHOTOGRAPHIC
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LIVING . . . THROUGH CHEMISTRY

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Wilmington 98, Delaware

Please send me more information on Du Pont Photographic Papers.

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Firm:

Title:

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City:

State:

Please have your Technical Representative call.

(Circle 190 for more information)

172



If it was worth filming, it's worth showing well. That goes for all those sound films that sell your products and train your people. You want to trust them only to a machine you have confidence in. Very soon now, show one of your films on an RCA 400 16mm. Sound Film Projector. *Look* carefully and *listen* closely.

You're watching the action of the most rugged, dependable projector top-flight RCA engineering has developed in its field. But still this compact, lightweight RCA 400 carries easily and operates like a breeze. RCA's exclusive Quick-Easy threading cuts set-up time to as little as five minutes even for the greenest beginner. From film opening to close, pictures stay clear and steady with sound crisp as it comes from the sound track itself.

Your films and your sales deserve the projector with *RCA* dependability... a single- or double-case *RCA 400 Sound Projector*. It's the *only* projector that's engineered by the world leader in electronics. The projector with nationwide service whenever you want it. Write us for the name of your nearest *RCA* Audio-Visual distributor. Or clip, check and mail the coupon from the *RCA* advertisement on the facing page for *RCA 400* details. Do it now!



AUDIO-VISUAL PRODUCTS

RADIO CORPORATION of AMERICA

CAMDEN, N. J.

(Circle 185 for more information)

data processing and information handling systems. This experience has enabled me to provide a brief summary of the "state of the art".

**BUREAU
OF THE
CENSUS**

**a machine
that reads**

Our first activity with modern computing machines was in assisting the Bureau of the Census. A development for Census should be mentioned briefly. This development involved automatic means for translating the data on the record sheets of Census enumerators into a form that could be fed directly into their computing machines.

The machine we developed has been named **FOSDIC** (Film Optical Sensing Device for Input to Computers). The machine reads marks on micro-filmed copies of documents that have been marked with an ordinary pencil or pen, and then processes the information into electrical pulses which are recorded on magnetic tape for direct input to an electronic computer such as the Census **UNIVAC**.

FOSDIC is designed to reduce the work that is now involved in converting written records into a medium acceptable as input by data-processing machines. This is particularly true since **FOSDIC** allows considerable freedom in design of the documents and does not require the use of any special writing instrument.

It is anticipated that ultimately the use of this machine will reduce appreciably the massive amount of paperwork entailed in summarizing Census information on the entire population. Although designed for census operations, **FOSDIC** may be generally applied to the processing of other types of information that must be handled in unusually large quantities.

With the development of many large-scale electronic computers in the past few years, there has been an increasing need for equipment to bridge the gap between the machines and their sources of information. . . . When human beings are considered as sources of in-

formation, only two partially automatic means of communication are in general use. These are (1) typewriters of various forms and (2) special marking instruments such as punches or conductive pencils. An alternate method is through the manual preparation of punched cards. To these methods has now been added **FOSDIC**, a completely automatic machine which processes marks made by an ordinary pencil or pen into a form directly which is usable by the computer.

**ARMY
QUARTER-
MASTER**

**a method for
evaluating bids**

Our work for the Army Quartermaster Corps gave us experience in coping with the problems of Government purchase and procurement.

In carrying out provisions of the Armed Services Procurement Act of 1947, a number of complications arise in determining the bidder or combination of bidders who will charge the true lowest cost to Government. True costs require consideration of different freight rates from factories to depots. The bidder himself may state restrictive provisions such as minimum and maximum quantities, or "block" or "hinge" bids whereby he may quote different prices on different quantities.

The attempted resolution of lowest cost for bids on contracts involving a variety of complicating factors, when carried out by manual methods, results in high cost both in time and manpower. On one typical operation, 700 man-hours were expended without trying all the possible combinations, and it was estimated that 4,000 man-hours would have been required to calculate all combinations. A second shortcoming of manual computation is that in some cases it is not possible to solve the problem at all in the time available. For example, a proposed contract for 860,000 woolen jackets to be fabricated for 13 different destinations, estimated to involve 223,000 different combinations, had to be cancelled because bids could not be evaluated by manual computations.

Accordingly, a program was estab-

lished at NBS to explore the use of new mathematical techniques (called linear programming) in conjunction with the use of high-speed electronic computing equipment for the evaluation of such complicated bid patterns. The linear programming computation procedure, as coded for SEAC, is then used with data on the various bids received for each specific problem, and the machine operates on the specific problem by first assuming that an award satisfying the various restrictions will be chosen regardless of its cost. A cheaper allocation is then sought, and it is substituted for the first. The search for still cheaper allocations continues until no cheaper award can be found. For the typical problem, about two hours of SEAC computation are required before the minimum cost answer is found.

The direct savings achieved through the speed of electronic computation can be illustrated by the fact, that, for a problem that would have required 1000 man-hours of labor at a cost for manual computation of approximately \$2,500, the machine could have tried all combinations in about 40 minutes at a cost of \$80 or less. Direct savings are also achieved through the saving of time since bidders may limit the effective period of their bids to option periods of 20 days or less from the bid opening.

In summary, then, the linear programming technique makes possible the development of solutions to bid evaluation problems in less time, at less cost, and with absolute accuracy.

VETERANS ADMINISTRATION **setting-up actuarial tables**

In an application elsewhere in government, the Veterans Administration has used computers for work in relation to actuarial tables. In this case, the David Taylor Model Basin's UNIVAC system was used to provide the actuarial tables necessary for the new Uniformed Services Survivors' Benefit program. Using conventional methods by desk calculation, this would have required an estimated 25,000 man-hours. The job actually took 1,443 man-hours. The cost by conventional means would have

been in the neighborhood of \$200,000; it was actually completed for about \$15,000 with the UNIVAC.

In the course of the entire job, the UNIVAC computed 357,012 numbers to eight significant figures. The 1,443 man-hours used on the problem included time spent in analysis and process-charting, flow-charting, coding, preparing desk-calculated samples for checking, preparation for and operation of the machine, report writing, hand editing and checking tables, and general maintenance.

The actual time spent by the UNIVAC in generating the numbers (not including checking of programs) was 41.4 hours. The total time used by the computer system was 104 hours. As a comparative figure, a few sample values computed by hand for checking purposes required 55 man-hours.

More significantly, however, the Congress directed that this veterans' insurance program should go into effect within 60 days from the time that the Act was signed. The use of the computer made it possible to provide the necessary tables so that the program did go into effect on schedule with maximum benefit to all concerned, something that would have been impossible without the use of these new general-purpose, high-speed tools.

NAVY **keeping inventories**
AVIATION **in balance**
SUPPLY OFFICE **in balance**

The Bureau has also assisted the Navy in applying automatic techniques to its inventory-control and supply problems. The data-processing application that is now in operation at the Navy's Aviation Supply Office is a good example of better use of present resources. In the Navy supply system, there are some 13 materiel control centers, called Supply Demand Control Points. These Control Points have cognizance over certain broad categories of materiel. In the case of the Aviation Supply Office, the responsibility is for aircraft, aircraft engines, and supporting spare parts and accessories. The supply replenishment actions used to be based on quarterly distribution and



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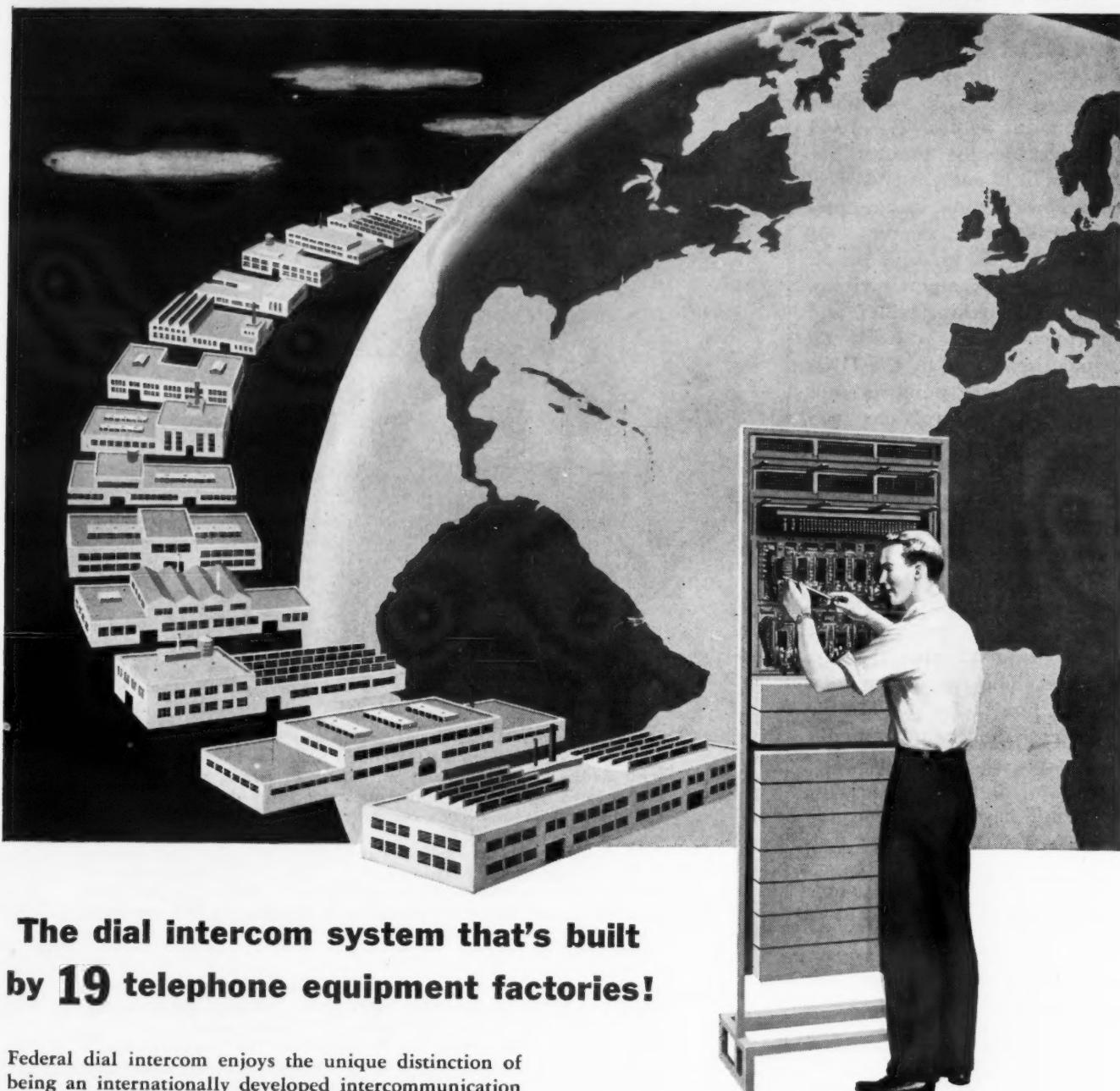
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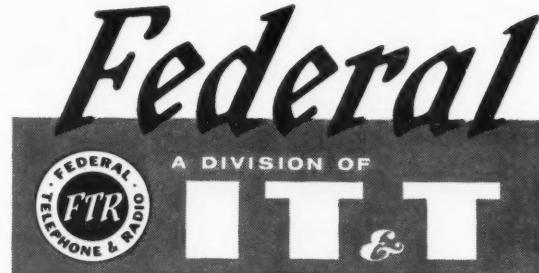
Federal dial intercom enjoys the unique distinction of being an internationally developed intercommunication system... combining the most advanced techniques of 19 automatic telephone switching equipment factories of the world-wide International Telephone and Telegraph Corporation.

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procurement in accordance with predicted demand determined by existing inventories and demand for a previous quarter. Under this control system, the regular quarterly actions had frequently to be supplemented by special actions prior to the next scheduled distribution in order to take care of fluctuations in actual demands. In some cases, as many as 40 percent or more of the stock transactions were interim transactions reflecting such unanticipated demands.

In an attempt to improve the control system, the Program Usage Replenishment System (PURS) technique was developed in the hope of attaining a more realistic balance between inventory levels and projected requirements based upon program plans. However, the introduction of this system for a few classes of supply items materially added to the computational workload at ASO. To extend the PURS procedure to additional classes of material required an even greater workload.

It was, therefore, reasonable to look toward the adoption of electronic data-processing techniques as a way of accomplishing this mission more expeditiously and more economically. The data-processing equipment that has been installed, the IBM 701 and 702, is now working on this job, so that management may more effectively control the procurement and distribution of supplies to meet requirements.

•••••
AIR MATERIEL COMMAND training personnel for electronics
•••••

The Air Force has had problems of computation for mobilization planning and for logistics control similar to that of the Navy's ASO. The Air Materiel Command is now using and actively exploring the further use of computers for logistics management. One of the problems they face is the development of a system which can be expanded during an emergency without requiring a greatly increased staff. The Bureau has assisted the Air Force in this program. In the first instance, the Bureau assisted in the selection and procurement of their first automatic processor for the Office of Air Comptroller. In the second instance, we are helping to assist the

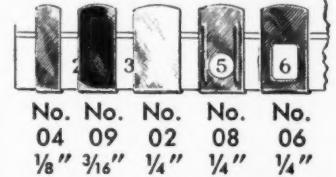
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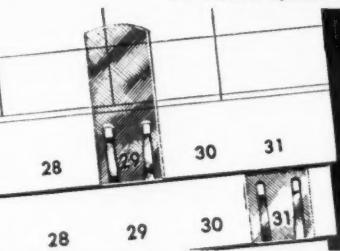
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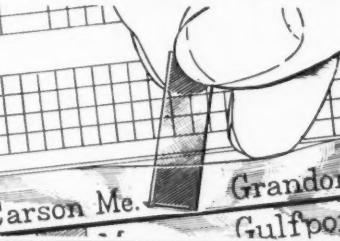
Nu-Viz METAL SIGNALS for Visible Systems



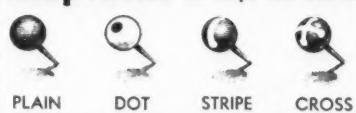
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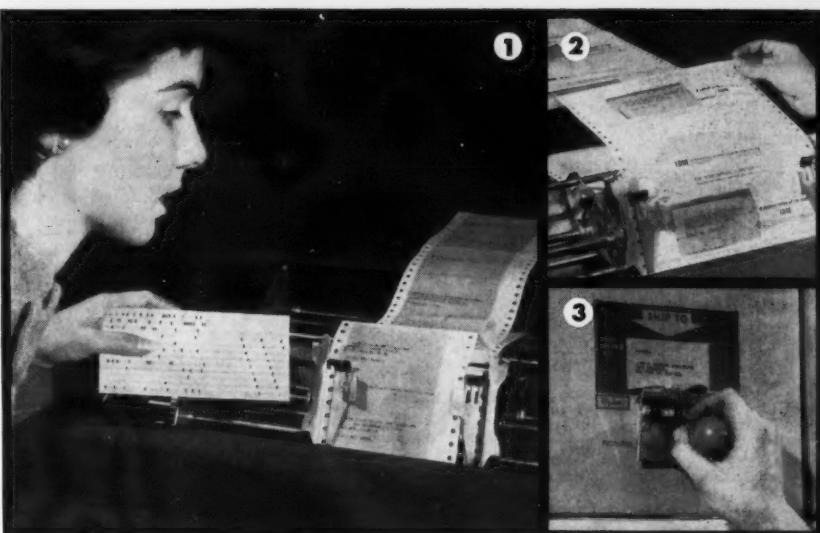
Air Materiel Command in training their supply and logistics personnel at various bases. *The interesting aspect about this program is that GS-4 and GS-5 stock clerks are being given an opportunity to learn to carry out some of the programming operations for the computer.* I have reports that they are doing quite well. I might mention here that the Bureau has now had considerable experience in training personnel to operate automatic electronic devices of this sort. I think it is one of the important values of our central computational and data-processing staff.

PROJECT TINKERTOY

modular construction of electronic equipment

There is one other important example of work along quite different lines. This deals with our work for the Navy Bureau of Aeronautics on a system for the mechanized production of electronic equipment.

The extensive dependence of modern military equipment upon electronic devices led the Navy to seek ways of increasing its mobilization potential with a system which might eliminate some of the previously experienced difficulties. Important among these difficulties are such factors as (1) extreme dependence on many sources of supply for components which, during periods of rapid expansion of production, can lead to many bottlenecks, (2) long lead time necessary to get large-scale production lines for military equipment into operation, (3) high degree of variability in product performance characteristics, leading to extensive and complicated maintenance problems particularly for military equipment (various estimates give the maintenance costs of military electronic equipment as 5 to 100 times the initial cost), and (4) extensive dependence of production techniques on hand methods. It is a curious anomaly that this industry, whose products have been widely heralded as making possible automatic factories for other industries, is in its own production technique extensively dependent on manual labor. Basic design systems for the production of electronic equipment have changed very



Punched-card systems also prepare Weber stencils to address shipments

Users of punched card or tape automatic accounting machines, including IBM's new Cardatype, can now prepare their shipment addressing master with their invoice forms or other documents at a substantial savings in time and money.

The Weber stencil, used with a small handprinter to address multiple shipments (photo 3), can be prepared in continuous form independently of other

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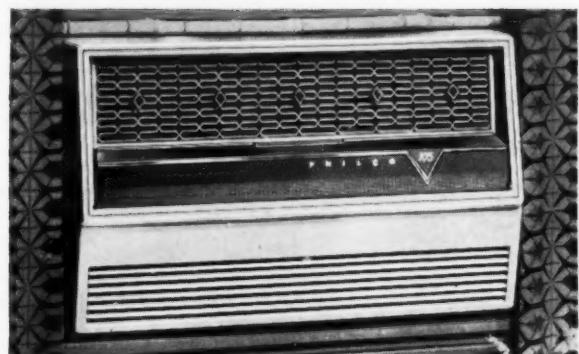
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little since the mid-1920's, when the inverted cake pan type of chassis assembly was evolved.

The project consisted of two parts: first, the development of a modular system for the design of electronic equipment and, second, the design of automatic machines for processing and assembling the components of the modular system. Solution of the first was considered essential to the successful completion of the second since early analysis led to the conclusion that any mechanized system which would assemble conventional components in conventional layouts would be unacceptably cumbersome and inflexible. The modular design system is based on a standard building block, a $7/8$ " square, notched ceramic wafer. Components such as resistors, capacitors, repetitive circuit elements, and tube sockets are made integral with the ceramic building block. These are assembled in skyscraper-type structures, yielding a standard module for each circuit stage. Devising circuit layouts by this approach involves planning in three dimensions rather than the conventional two dimensional approach heretofore employed. These standard building blocks and modules are readily adaptable to automatic machine methods. During the assembly, 100% automatic testing is provided for components and sub-assemblies. The resulting product shows an extremely high degree of uniformity. Flexibility is assured in that a production line can be converted in a matter of hours from building a civilian type product, such as a radio receiving set, to building complex military electronic equipment. This provides an unusual capability in standby capacity. Further proof of the flexibility is provided by the fact that a wide variety of types of electronic equipment have been designed for assembly by the modular technique. The modular design and assembly also afford an unusual possibility in standard packages for sub-assemblies with attendant simplification of the maintenance and repair problems.

These developments were turned over to industry about two years ago and several companies are now engaged in the production of electronic items using modular techniques. **m/m**

MM

asks the
experts

THIS MONTH'S EXPERT



Dr. Ernest Dichter,
President
Institute for Motivated Research

Dr. Dichter pioneered the introduction of motivational techniques in this country. Almost two decades ago, he conducted his first study of consumer motivations for Compton Advertising.

To date, the Institute has conducted more than 500 major studies, numerous packaging and advertising tests, and has accumulated a library of over 100,000 individual case histories.

His staff comprises some 30 specialists in the fields of psychology, sociology, anthropology, statistics, marketing, and related social sciences, plus experts in the fields of advertising, promotions, merchandising, and public relations. The Institute is the largest firm in its field.

How to use psychological incentives

Three rules for improved management-employee relationships:

... Gratify their ego

... Be fatherly, not paternal

... Be considerate of his needs

Management must provide more than dollars and cents rewards in order to get maximum employee productivity. "Emotional bonuses" and "emotional profit sharing plans" are just as important to employee "morale" as a strictly monetary approach to the job.

A steady rise in our standard of living has resulted in a *changed* and *changing* psychology of the average employee. Today, he is more confident of his abilities, and more conscious of his contribution to the success of the company that employs him. He has acquired a new self-awareness; he demands that management recognize his *identity*, and his worth as an individual.

In our motivational studies for large employers (such as the General Motors Company and the Jewel Tea Company) we have discovered that *practical solutions* must, first of all, be *psychologically practical*. Taking into consideration management's contributions to employee welfare in the forms of high wages, bonuses, and profit-sharing plans, motivational research has had to ask whether management has provided emotional rewards as well.

In studies of management-employee relations, we uncovered certain specific underlying reasons for employees' attitudes toward management and toward their own work. On the basis of these findings, we have been able to establish a number of *psychologically-valid incen-*

tives for increasing employee efficiency. These incentives fall under the following three main headings:

1. Provide *ego-gratification* by recognizing the employee as an individual, and giving him credit for his contributions to the company's success.
2. Provide *positive fatherliness*, not paternalism.
3. Show *creative considerateness*.

Providing ego-gratification

Ego-gratification is a deep-seated emotional need. It must be met by something more psychologically satisfying to the employee than a pat on the back by his immediate superior, or his first name being facilely recalled by some of the "top brass." The employee prefers to be acknowledged as a distinct individual, who has made a valuable contribution to his firm's welfare.

The extent of the modern employee's self-awareness was clearly revealed in our Jewel Tea Company study in which we explored the effects of their profit-sharing plan and bonus system. Jewel Tea has a combined profit-sharing and individual savings plan aimed at preparation for retirement. An eligible employee deposits from \$1.00 to \$5.00 per week in the trust which was created by the plan. Out of its profits the company adds 15% of its net earnings before Federal income taxes in excess of a base related to the number of preferred and common shares of stock outstanding.

Each year's company contribution is allotted to the individual accounts of participating members, half on the basis of their earned salary, and half on the basis of their individual deposits in the retirement fund.

We were prepared to find signs of employee appreciation and gratitude to the company for its generous profit-sharing plan. Instead, we discovered that the employees were giving themselves bouquets for the success of the plan. Individual respondents pointed proudly to their own qualifications and indispensability, completely ignoring management's contribution. They felt that the profit-sharing plans had been made possible by their own alertness and contributions to the business. Their concern was not so much with what the company was doing for them, individually, as with getting credit for the company's success.

Many firms today acknowledge the employee's need for participation and recognition of his individual contributions by setting up "suggestion boxes". We have found, however, that this procedure only widens the psychological gap between management and employee, providing a source of hostility instead of ego-gratification. When the average employee drops his idea into the suggestion box, it becomes one of many competing ideas. Since at least 99 percent of the contributions are usually weeded out and discarded, his will



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probably wind up in the waste basket. This gives him a feeling of rejection, and intensifies his hostility.

In addition to the fact that it frustrates the employee, the suggestion box is unable to provide ego-gratification because of another basic weakness. It puts the management-employee relationship on a *formal* rather than a *personal* basis. This does not inspire the friendly feeling which Americans (as we have found in study after study, whether employee, prospective car buyer, or housewife) search for in their relations with business firms.

Instead of suggestion boxes, clear lines of communication must be established between management and employee. The latter's ego requires that his ideas be recognized as worthy of personal consideration by his immediate superior, or by some other specially designated representative of management, who will lend a friendly, sympathetic ear.

When these lines of communication have been established, even suggestion plans are possible, as we discovered in our General Motors study. In analyzing that company's employee relations, we found that its suggestion plan, against the background of a healthy company-employee relationship, was very successful in fostering closeness to the company. We suggested that the effect could be increased, that greater ego-gratification could be provided, by keeping the employee informed as to the point his suggestion had reached in the suggestion plan procedure, thus making him feel that he was participating in the carrying out of his idea.

A good relationship between company and employee is an essential psychological ingredient, without which there cannot be full ego-gratification. This ingredient is a complicated one because it involves the employee's contradictory emotional needs. He wants to be treated as an equal, and he needs to be considered the equal of his supervisor or other immediate superior. At the same time, he wants the other man to be his authority, to serve as a surrogate-figure who protects him against his own mistakes, or who grants him security on the job.

When both sides of this contradictory coin are offered, we usually find an in-

crease in employee efficiency. In the General Motors Rochester plant, we learned that all employees, including executives, eat together in the company cafeteria. This is a dramatic illustration of "equality", but it is not enough to provide complete ego-gratification. The executives, in addition, had to prove themselves as "superiors", as leaders and father figures. This they did by proving reliable, by demonstrating that they could take good care of the welfare of the employees. For example, in one General Motors division, management displayed foresightedness in having the subway lines extended to reach the plant. This did a great deal for employee morale by demonstrating that they could rely on their leaders.

The "hitch" in the management-employee relationship often occurs at the supervisor-employee level. Usually, the employee's immediate supervisor is someone who had but recently performed the same job as himself. This fact is an immediate and flagrant challenge to the latter's emotional need for equality. He resents any authoritarian tone that the fledgling "superior" might adopt because this deflates his ego.

The astute supervisor will provide ego-gratification by "equalizing" his own role, by offering his services as a "helper" who knows just a little more of the problem than the employee. By presenting himself as a *tutor* and not as a *boss*, he de-emphasizes his change in status. At the same time, he assures the employee that his own status has not been lowered. This will effectively meet the employee's contradictory emotional needs: he will have the supervisor available as an equal in *status* and also as a superior or father-figure in his role of *teacher* or "expert". Whether or not the supervisor is a former "bench buddy," his recognition of his subordinate's need of equality will usually get the same sort of favorable response as a Jewel Tea Company manager got from one of our employee-respondents: "The manager came down to see me several times. He is a very nice man to talk to and he won't give you that old line. He just comes down and talks to you man to man."

Establishing "fatherliness"

Next, we turn to our second incentive

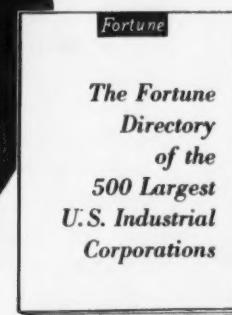
for increasing employee efficiency, *positive fatherliness*, not paternalism on the part of management. The average employee resents management paternalism as a denial of his own intrinsic value, and as outright condescension ("status deflation"). But his deep-set emotional need of being taken personally under a protective wing, makes possible the practice of a kind of positive fatherliness, devoid of supercilious, ego-assaulting content.

It is advisable for business concerns to install counselling departments to lend a fatherly ear to troubled employees, and to give them sound, friendly, practicable advice. These departments should be under the direction of trained psychologists and sociologists. They should be able to direct an employee with a pre-school child to a good nursery school. They should be in a position to recommend schools at which worthy employees can study at company expense to better their positions with the firm. These departments should provide employees' children with vocational guidance.

Expressions of positive fatherliness such as I have suggested above would be positive proof that the company "takes care of its own" without any ulterior, profit motive. Many forward-looking firms have already acknowledged the need for that kind of approach to their employees, and have achieved notable results in lifted morale and greater efficiency.

Here is a notable example of what a fatherly policy toward employee needs can accomplish in the way of employee enthusiasm for the company. In a study we conducted for the Endicott Johnson Corporation, one of our respondents, ecstatically appreciative, told us: "It (Endicott-Johnson) is the greatest industrial democracy in the world today. They have done more for people who work for them—they lead the field in helping the working man. They own and operate their own 400-bed hospital for their employees in the East . . . provide their employees with swimming pools, golf courses . . . Thousands of homes are bought by employees, financed by the company . . ."

One of the acid tests of the positive fatherliness that a company demonstrates to its employees takes place in



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the area of *old age*. We have found that all employees are concerned with their declining years, but very few find pensions a satisfactory solution. Most want to continue to be useful after they have reached the retirement age, and feel, as one of our respondents sharply but pointedly remarked, "If they're really interested, they can make some other job for us that we can handle when we get old."

The forward-looking company, truly concerned with employee problems—*on a continuing basis*—might organize a *department of geriatrics*, which would study the problems of the aged and offer them guidance in continued usefulness. In adopting a "geriatric plan", management would be indicating quite clearly that its concern with the employee's welfare does not end with P-Day (the day his pension begins), but that it intends to continue indefinitely as his fatherly guide to useful living.

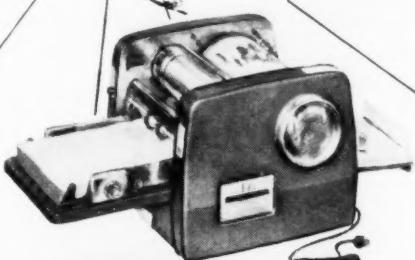
Management's good intentions

Our final incentive for increased employee efficiency (management's demonstration of "creative considerateness") takes into account the working force's demand for day-to-day proof of management's good intentions. Employees' fear, suspicion, and distrust of their employers have caused them to form a defensive "armor" of cynicism, toughness, and disbelief in management's motives. Their experiences in a rough, competitive world have hardened them against their employers' "idealistic", "non-profit" claims. To counteract these negative feelings, management has to go out of its way to convince the working force that there is no "catch" to its good works. A psychologically credible way of achieving this, we have found, is for management to demonstrate "creative considerateness."

This is not always a psychologically easy task. In one instance, where a manufacturing firm provided a new parking lot for the convenience of its employees, we found that the workers wondered if the company hadn't gone to the expense in order to get them to work on time and make the change of shifts faster. As long as a company gesture may be associated with more efficient work, the "creative considerateness" is not operative.

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The General Motors Company counter-attacked just this kind of skepticism by installing shoe shine machines in the workers' rest rooms. This was creative considerateness, pure and simple, because management was going out of its way to please its employees in a manner that permitted no innuendo about "ulterior motives" and "mercenary." No employee could gripe, "I wonder how much they're making out of this deal." In addition to providing a convenience, the company was offering *status gratification*. It was acknowledging that factory workers, after the day's work was done, were the same as other American citizens of any income group, no matter what the wages and salaries were. These workers, too, wanted to dress neatly, and to look their best. We found that this company's demonstration of creative considerateness made the index of employee morale soar. Similar favorable results were achieved when the Readers Digest decorated each office in a different style. Providing new office furniture, or installing "coke" machines, water coolers and air conditioning, works wonders with employee response to management.

No one would be so naive as to suggest that because modern business firms have become aware, to some degree, of the employee's psychological needs, that we are now on the threshold of a golden era in management-employee relations. However, there are signs of increasingly better relations as management learns more about the underlying psychological motivations that shape the employee's attitudes and response to his employers and his job. m/m

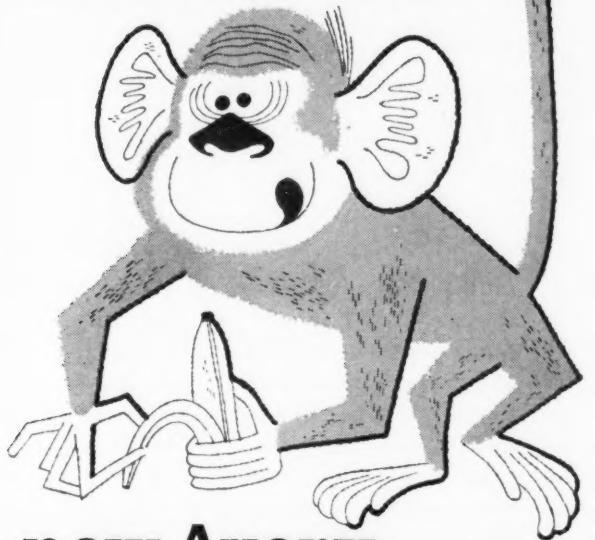
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(see page 43 for details)

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FEBRUARY 1956



AGE and SEX of plant workers

Women outnumber men 5 to 1 in assembly work

The Census Bureau reports there are more women "over 24" than men. Minneapolis-Honeywell Regulator Company reports that employment in its Minneapolis plants is almost a fifty-fifty proposition, with distaff workers totaling 5,112, nearly half of the entire 12,522 enrollment. This number is only 18% off the 1944 total, when the hiring of women was at a wartime peak.

Further study indicates that the gals decisively outnumber the men in one work category. It's a 5 to 1 ratio in favor of the women on the assembly lines. This is something of a tribute to their ability to perform the delicate, precise operations required to make intricate heating controls, delicate aircraft gyros, and other automatic control devices manufactured by the firm.

Feminine representation, naturally, doesn't stop in the factory. In addition to the customary stenographic and clerical office positions traditionally held by women, many distaff members capably supervise departments, serve as group leaders, handle engineering chores, and engage in research and other related activities. One woman holds a junior executive position with the firm.

Age, too, is another of the traditional barriers no longer existing in the Honeywell plants. Although the average age of the women is 33, more than 25% are over 40, and there are some 345 who are in their late 50's or 60's. m/m



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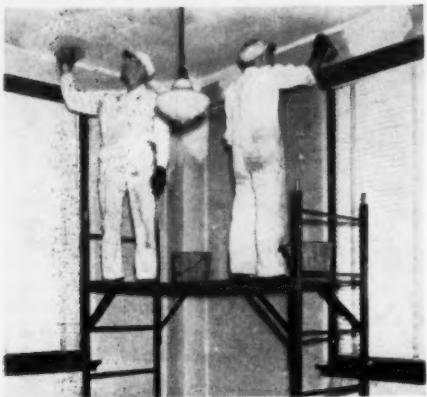
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method of the month

Keeping a daily eye on

by Arie Start,
Paymaster, Jervis Corporation, Grandville, Michigan

Modern business demands modern methods of evaluating production costs, and present day low profit margins make it all the more important that these cost evaluations be at management's fingertips at all times. During the past 15 years, we have been constantly shifting our accounting systems to meet every change of business. This has given us faster, easier, cheaper, and more accurate figure-keeping methods, the net result of which has been up-to-date figures that reveal the manufacturing costs of each product we manufacture. They tell us immediately which parts are being profitably produced and indicate any operation where

it is necessary to tighten the cost belt.

How it works

Under a standard cost schedule, the initial record in our labor and cost accounting system is a job ticket, prepared in the factory time office. This ticket contains shift information, part number, work center number, standard hourly rate for each part per thousand pieces, operation number, elapsed time, rework, and other data.

The tickets are sent to the accounting department where they are sorted by clock number and rated with the individual's base hourly rate. Calculator operators then extend the tickets by

multiplying the number of pieces by the standard hours to get the earned hours per thousand. If a machine operator has not produced the number of pieces under the standard schedule, the girl extends actual hours for the day rate. This information is then posted daily to wage accrual ledgers. The payroll is written directly from these.

The job tickets are separated by direct and indirect labor. Direct labor is the cost for work that can be allocated to a given part number and account number, while indirect labor covers costs for all work that cannot be specifically allocated to a part.

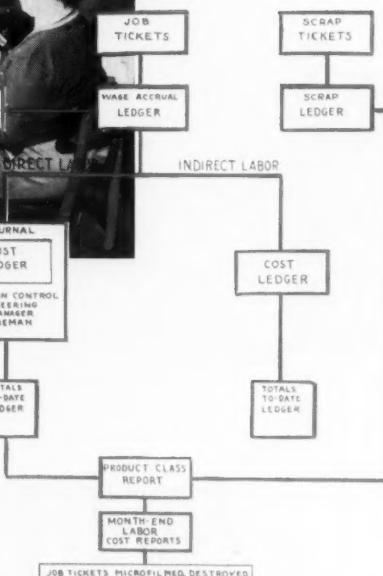
Direct labor costs

Direct labor tickets are then sorted by part number, machine number, and shift. Using an accounting machine, an operator posts variance ledgers and a four-part journal. The operator indexes the part number, operation number, the number of pieces, the standard hours per thousand, and the actual hours of work done. The machine automatically dates the ledgers and computes and prints the difference of the two times as the time variance figure. By indexing the dollar amount of the standard rate and the actual amount, the variance is printed automatically.

The machines provide grand totals of standard, actual, and variance hours and amounts. These totals are made for departments, machine centers, and shifts. They are also printed on each part of a four-part journal that has been prepared as a by-product of ledger posting. The totalled journals are distributed to the production control department, industrial engineering,



ABOVE: Daily posting of cost ledgers from job tickets and accumulative totals provide factory management with cost figures within 24 hours of the actual production operation. RIGHT: This flow chart illustrates the tight accounting control over labor and material costs.



production costs

Modern cost accounting procedure provides fast accurate information

COST DISTRIBUTION LEDGER					
(DIRECT LABOR BY COST CENTER)					
DATE	PROOF	ACTUAL	STANDARD	HOURS	AMOUNT
SEP 27	10	7.54	7.47	7.47	54.47
	11	7.51	7.44	7.44	54.47
	12	7.51	7.44	7.44	54.47
	13	7.51	7.44	7.44	54.47
	14	7.51	7.44	7.44	54.47
	15	7.51	7.44	7.44	54.47
	16	7.51	7.44	7.44	54.47
	17	7.51	7.44	7.44	54.47
	18	7.51	7.44	7.44	54.47
	19	7.51	7.44	7.44	54.47
	20	7.51	7.44	7.44	54.47
	21	7.51	7.44	7.44	54.47
	22	7.51	7.44	7.44	54.47
	23	7.51	7.44	7.44	54.47
	24	7.51	7.44	7.44	54.47
	25	7.51	7.44	7.44	54.47
	26	7.51	7.44	7.44	54.47
	27	7.51	7.44	7.44	54.47
	28	7.51	7.44	7.44	54.47
	29	7.51	7.44	7.44	54.47
	30	7.51	7.44	7.44	54.47
	31	7.51	7.44	7.44	54.47
	32	7.51	7.44	7.44	54.47
	33	7.51	7.44	7.44	54.47
	34	7.51	7.44	7.44	54.47
	35	7.51	7.44	7.44	54.47
	36	7.51	7.44	7.44	54.47
	37	7.51	7.44	7.44	54.47
	38	7.51	7.44	7.44	54.47
	39	7.51	7.44	7.44	54.47
	40	7.51	7.44	7.44	54.47
	41	7.51	7.44	7.44	54.47
	42	7.51	7.44	7.44	54.47
	43	7.51	7.44	7.44	54.47
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	49	7.51	7.44	7.44	54.47
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	109	7.51	7.44	7.44	54.47
	110	7.51	7.44	7.44	54.47
	111	7.51	7.44	7.44	54.47
	112	7.51	7.44	7.44	54.47
	113	7.51	7.44	7.44	54.47
	114	7.51	7.44	7.44	54.47
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	151	7.51	7.44	7.44	54.47
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	161	7.51	7.44	7.44	54.47
	162	7.51	7.44	7.44	54.47
	163	7.51	7.44	7.44	54.47
	164	7.51	7.44	7.44	54.47
	165	7.51	7.44	7.44	54.47
	166	7.51	7.44	7.44	54.47
	167	7.51	7.44	7.44	54.47
	168	7.51	7.44	7.44	54.47
	169	7.51	7.44	7.44	54.47
	170	7.51	7.44	7.44	54.47
	171	7.51	7.44	7.44	54.47
	172	7.51	7.44	7.44	54.47
	173	7.51	7.44	7.44	54.47
	174	7.51	7.44	7.44	54.47
	175	7.51	7.44	7.44	54.47
	176	7.51	7.44	7.44	54.47
	177	7.51	7.44	7.44	54.47
	178	7.51	7.44	7.44	54.47
	179	7.51			

plant manager, and department foremen.

The journal shows the clock number, part number, earned and standard hours, and earned and standard pay, with variances. This information enables the department foreman to check performances on parts and employees the day following the actual operation. It enables the industrial engineering department to review performances on piece rates and immediately investigate sub-standard operations. It enables the production control department to schedule work into various machine centers by maintaining a history of per-

centage performances for future scheduling of work loads. Finally, it keeps the plant foreman constantly informed on over-all departmental efficiency.

Totals from these journals eliminate the necessity of a second run of the direct labor tickets to get necessary accounting information. Totals by cost centers (a cost center may comprise as many as five machine centers) are posted from the journal to "to-date" ledgers for direct and indirect labor. We also check totals of the cost ledgers against totals of the wage accrual cards.

The direct labor tickets are totalled

at the end of the month and a report is prepared by product class (refrigerator hardware, refrigerator door mechanisms, etc.). This report carries the part number, standard dollars, variance dollars, and percentages of the variance to standard. This percentage by part number is accumulated over a three-month period and again reviewed.

The standard cost schedules are revised, if necessary, to show the actual percentage of performance to standard as an added cost, because direct labor variance is not included in standard overhead cost. When estimating a job, the variance history of the product class is added to our estimate as an added cost. After the three-month history is arrived at, the product variance cost is an actual part number percentage.

On indirect labor, the tickets are sorted by department, machine center (where possible), and account number. The indirect labor accounts include direct labor variance, rework, extra operation, and die repair. These accounts are posted on the accounting machines to indirect labor ledger sheets by account number. A report for indirect labor is prepared at the end of the month in the same manner as the direct labor report, with the cost by cost percentage. These percentages are applied to the standard cost card in the same way as the direct labor variance cost is figured.

We are attempting to determine an accurate part number cost under a standard cost program. The exceptions which cause the greatest cost difference between standard and actual costs are segregated and applied as a percentage factor by part number. This system helps determine which of our products or parts are sub-marginal, and indicates where to take corrective measures.

By systematically organizing this work, and making a single accounting machine operation perform as many cost functions as possible, we are able to accumulate cost information while still gaining complete labor distribution for our general books. In fact, our books are now closed by the fourth or fifth working day after the end of the month. The system is so fast, simple, and accurate that our three machine operators easily post 3,000 labor tickets a day.

For more details, circle number 232 on the Reader Service Card.

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1. AVOID SELF-DIAGNOSIS

In case of doubt see your doctor.



2. AVOID WORRY

Worrying cures or prevents nothing.



3. AVOID OVER-FATIGUE

When you rest or sleep, your heart's work load is lightened.



4. AVOID OVER-EXERTION

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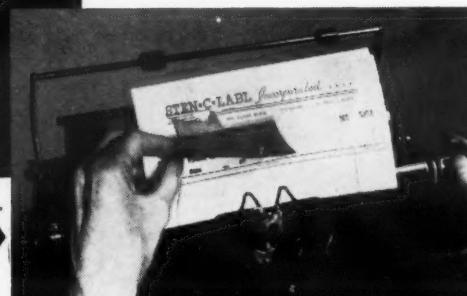


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(Circle 111 for more information)

FEBRUARY 1956

IF office workers could hire their own bosses ...

If office workers could hire their own bosses, what would they be like? To find the answers, the National Office Management Association—bosses themselves—questioned 6,537 office workers all over the United States and Canada. Based on the study, the following composite picture of the "ideal boss" has been put together by NOMA officials.

He is a man between 40 and 49 with a high degree of managerial skill who is eminently fair to workers with a good deal of common sense. Where there are a lot of older women, he should also be possessed of a particularly high degree of intelligence. Where there are a lot of young women, on the other hand, an understanding nature is a big help. Experience is desirable but not absolutely essential, except to older men, perhaps. He doesn't have to be very energetic—as a matter of fact, laziness isn't held against him, and he doesn't need much of a sense of humor unless he has a lot of older women under him. If he is impatient, most of the workers won't mind, but they won't stand for his being unjust. They want him to be ready with a pat on the back for good work, and to sort of let people know what's going on in the business.

In offices where there are a lot of young people, a boss with a "superior sort of an attitude" has several strikes against him; where there are a lot of older workers, lying is absolutely "out." While most workers don't care whether the boss is lazy, or late for appointments, they don't like to see him put things off either where they are concerned, since most workers don't want to work under pressure to make up. Grouchiness makes the boss unpopular with the young women, and a 'know-it-all' attitude among the men. Only the older women seem to worry about his appearance.

While he shouldn't be too stuck-up to call workers by their first names, they don't mind too much if he wants to be "mistered". Most workers, particularly the younger women, can take stubbornness in their stride, while the older workers don't hold a tendency to "temper" against a boss if he is all right in other ways. m/m



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thought starters

Thought Starters deal with a "practical solution to a management problem." The Editor invites contributions—which are paid for at our normal space rates.

PHOTOCOPY thought

Processing sales correspondence saves firm both time and money

The use of photocopies of inquiries and other customer correspondence provides a means of passing information to field salesmen quickly and at low cost. The method has saved Walter N. Steele, San Francisco representative for a manufacturer of grain and seed processing equipment, from one to several days in transmission time.

By simply copying the original letter and writing a brief note of instruction on it, they not only get the fastest possible action, but give the salesman an exact duplicate of the original so that he has the best and most complete picture of any situation.

The Steele organization has a San Francisco home office and four field sales engineers in branch offices at Los Angeles, Denver, and Twin Falls, Idaho. They represent nine manufacturers; operations cover eleven states.

In the past, the practice had been to have copies typed of all important letters from customers. Similarly, if an account asked a question about an order, the San Francisco office had to write a letter to the salesman about the matter. Copying of this sort—of all types of correspondence with customers and prospects—used to require a full-time typist in the home office, and even then there was occasionally a backlog which would hold up important copies for some time.

With the new photo-copying system, this work can usually be cleared up within the first hour after the office opens. Because of this, it is estimated that the photocopy machine was paid for in the first 45 days after it was installed in the office.

The whole photocopy process takes well under a minute for each dry, ready-to-mail copy, and several can be



made from a single matrix—Steele's office averages three to four copies of each original.

An unexpected saving incident to this method of handling inquiries has been a reduction of at least 50% in the telegraph bill. In the past, if an ordered item was unavailable or some other message had to be sent quickly to a customer, the office wired the salesman immediately. Now, with the speed of photocopy replies, telegrams are unnecessary in many cases—and the salesman knows more about the situation because he has an exact copy of the order or letter with notations on the status of the matter.

For more photocopying information, circle number 244 on the Reader Service Card.

FILMS

thought

Weekly film series offered free to business groups

Business organizations can obtain free weekly film programs, dealing both with entertainment and informational subjects. These can be shown, for example, to employees during lunch periods, at sales meetings, and at foremen's club meetings. The series is called "Dateline: America," and is made pos-

sible as a public service by leading American industries, associations, and various foundations.

The program works in the following manner. Each week a number of 16mm films are sent to each of the subscribing organizations. For example, one program is headlined by a film about a non-stop trip to California. Another program centers around the famed automobile race, the Indianapolis "500." Other subjects in the series deal with sports, hobbies, do-it-yourself, human interest topics, industry, history, and many others.

Scheduling will be fitted to the requirements of the subscriber. Films will be sent, monthly, semi-monthly, weekly, or if desired, on a specific irregular basis. The only cost to the subscriber is the postage charge.

For more information, circle number 245 on the Reader Service Card.

VACATION thought  starter

Company substitutes vacation for bonus

Two three-day weekends in a row, plus the impending low holiday production, prompted the management of the Coleman Instruments Company to offer their employees a 10-day vacation with pay, instead of the usual cash bonus. The question was put to the employees, and they voted most unanimously for the vacation.

The company says the extra cost has been more than balanced by increased morale, elimination of a poor production period, and the saving of the usual Christmas bonus expense.

EXECUTIVE thought  starter

New literature of interest to management

MATCH BOOKLET OUTLINES
ADVERTISING CAMPAIGNS

Main purpose of a colorful booklet called "Let's Start From Scratch", is to list suggestions for methods of book match advertising which will aid the

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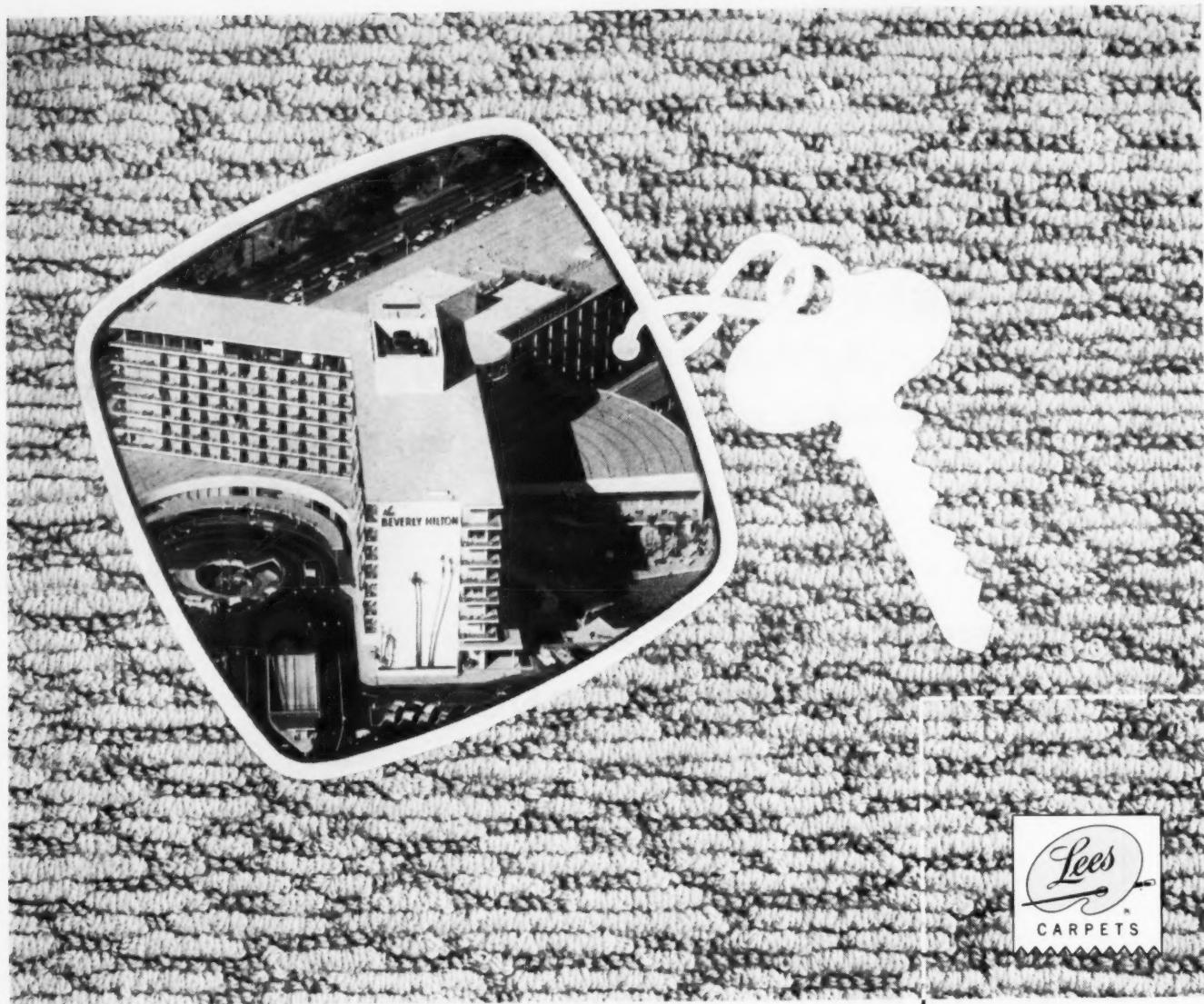
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- **L'ESCOFFIER**, the de luxe dining area, is designed around a blue geometrically patterned carpet by Lees.

- **CORRIDORS:** Use of different colored Lees Carpets in connecting corridors creates a dramatic yet warm and restful effect.

(Circle 167 for more information)



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NOTE: In every public space, good carpet means good business. Lees designs and makes commercial carpets for every budget and business requirement. Lees Carpets are a practical, long-term investment in terms of hospitality, attractiveness, and service.

average business man in planning advertising campaigns. It contains information about the various sizes of match books, how to utilize the different covers to their best advantage, the benefits of advertising on the inside cover, and numerous ways of packaging and displaying match books.

For a free copy, circle number 240 on the Reader Service Card.

GETTING PERSONAL IN REPETITIVE CORRESPONDENCE

A new 16-page illustrated booklet entitled "Quality with Quantity", presents techniques and tips on injecting the personal touch into repetitive correspondence or direct mail promotion. It covers such subjects as the advantages of the personal letter, cost comparisons of automatically typed and hand typed letters, the carbon follow-up technique, and information on the reply card.

For a free copy, circle number 241 on the Reader Service Card.

NEW MANUAL ANSWERS QUESTIONS ABOUT RECORD STORAGE

Questions concerning record retention, record storage, and record destruction are answered in a new 28-page booklet entitled "Manual of Record Storage Practice."

It reflects the record storage practices of a large number of commercial and industrial firms and financial institutions. With this guide, tempered by individual needs and requirements of your firm, you can readily set up a retention plan covering your records.

For a free copy, circle number 242 on the Reader Service Card.

PENCIL SELECTION GUIDE AVAILABLE TO OFFICE MANAGERS

A guide for purchasing agents and office managers in selecting pencils is now available in a booklet published recently. It explains the fundamentals of pencil quality, degrees of hardness, and the economy of various types of black and colored pencils for general checking, marking, and steno use.

How to select copying pencils for manifold forms, legal forms, and duplicating machines is also explained.

For a free copy, circle number 243 on the Reader Service Card.

The author, using a pointer and a scaled layout, is shown outlining details of proposed departmental space requirements to members of Connecticut General's building committee.

by Malcolm F. Hood,
Ass't. Secretary, Connecticut General Life
Insurance Co., Hartford, Conn.

How to program

the construction of a new office building

QUESTION: The new Connecticut General home office is one of the most highly publicized business buildings in the nation. As a member of the planning committee, what, in your opinion, is the single, most difficult problem a company faces in planning a building?

ANSWER: Before I answer let me first qualify my remarks by reminding you that our building is not yet a reality. We have developed a number of new planning techniques, the most important of which is the use of a mock-up, but our building isn't "built." In answer to the question, however, I think I can say that uniformity in decision-agreement from all those concerned that a new building not only is needed, but that each individual decision thereafter is an economical and satisfactory solution—is the difficult problem we faced.

QUESTION: Then the actual planning is not as difficult as getting a meeting of the minds among the top officers.

MR. M. F. HOOD joined the Connecticut General Life Insurance Company in 1925. He was named Assistant Secretary in 1949 and has held that post since. The company's proposed new building, which he discusses here, has provided several much discussed innovations. Chief among these is the Mock-Up for pre-testing materials and construction details (See MANAGEMENT METHODS Magazine, November 1955).

ANSWER: That is a little strong. Dealing with a group of informed and interested executives is a problem, of course. But, when you consider the alternatives open to a company after the initial decision to change our quarters, I think our Committee Method worked out very well. For example, a company can rent additional office space, rent a new building, build for itself and tenants, add a building to existing space, etc. The initial investment in a new building is tremendous, and no company officer makes the decision to spend large sums of money lightly.

QUESTION: You mentioned a "Committee Method." Do you mean all building decisions were made by a group?

ANSWER: Yes, we set up a senior building committee which reviewed all recommendations and made the final decisions in cases where alternatives were indicated. Basically this is the approach we used to solve all planning problems.

QUESTION: Wouldn't it be a lot more practical—and easier—to hire experts to make complicated decisions?

ANSWER: These problems are only as complicated as the company decides to make them. Of course, a firm can place the whole problem in the hands of the architect and designers, if it so chooses. Then can say, in effect, "Here's what we need.

Build the building the best way you know how, and when finished, we'll move in."

QUESTION: Apparently you don't feel this kind of solution can really meet the needs of the company?

ANSWER: That is the real question. Possibly it may. The interpretation of needs by an architect may be perfect. But if a company has unusual space and layout needs, not easily understood, I would say that, in the face of an expenditure of several million dollars for a new building, its executives should stay as close to construction details as possible.

QUESTION: Let's say the decision to build has already been made, what should a company do next?

ANSWER: The first thing to do is to select a building committee for the important decisions of policy. In our own case, we had a committee of six vice presidents with the company president acting as chairman. To supplement this management committee, we next appointed a junior executive committee to tackle the operational problems directly. Their functions were to do the research and prepare the facts necessary for the senior management committee to use as the basis of their many decisions.

QUESTION: What about architects

and construction firms? The selection of a firm isn't easy. How did Connecticut General make this choice?

ANSWER: We were guided by two general rules: price and the quality of previous work. Naturally, several competitors will bid for a job, and final choice is hard. In our own case, we picked the firm of Skidmore, Owings, & Merrill as architects, and the Turner Construction Company as general contractors. You may also wish to hire structural and mechanical engineers, as well as consultants on such items as acoustics and lighting.

QUESTION: With the team complete, could you outline how your Committee Method worked, including its relationship to these outside organizations?

ANSWER: First, to complete our team, we added a well qualified building materials consultant as advisor to the building committee. To integrate our organization, the secretary of the management committee became chairman of the junior or working committee. This means that one man is aware of all pending matters and it keeps the communications between the groups in good working order. Both architect and contractor have liaison men who relate their work to each other and who coordinate their efforts with our own organization. This small but important nucleus refers special questions or problems to our





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consideration via the junior committee.

QUESTION: How often do these groups meet?

ANSWER: Both company committees normally meet once a week—oftener if needed—as separate committees or jointly. Monthly, the committees and our materials consultant meet with the architect and general contractor. The engineers and special consultants attend these meetings as needed.

QUESTION: What happens when a special or emergency issue comes up which needs immediate attention?

ANSWER: Items that can't be handled by telephone are likely to appear on the agenda of the next large monthly meeting. If they are pressing enough, they get special, prompt handling.

QUESTION: What is the next step in the planning operation?

ANSWER: To select a site, if you have not done so by now. In our case, we had already obtained a 268 acre tract in suburban Hartford, Conn. However, I imagine it is equally efficient to select the site after the team has been named, if you know the general area you want to be in. In spite of the fact that we owned that tract, we studied a dozen or more others. Our site influenced the decision to build a horizontal type building, which, at the same time, we found to be more suitable to the insurance business.

QUESTION: How do you decide on the selection of one building design over another? For example, a one story structure instead of multi-stories?

ANSWER: That is where the building committees operate. They are responsible for such decisions. For example, to determine the type of building most desirable, the committees examined the criteria shown in (Figure 1).

QUESTION: How did the junior operating committee use these criteria as the basis for their research? What did they actually study?

ANSWER: There were two chief lines of research: to establish work flows and to determine space requirements. Work Flow was the basis for the first line of research because it contributed to layouts and space

DETERMINING FACTORS FOR MATERIAL DECISIONS

FIGURE 1

- 1 Higher initial cost vs. higher maintenance costs.
- 2 Departure from maximum efficiency in favor of employee comfort.
- 3 Clear-span space vs. columns (and the cost picture.)
- 4 Flexibility vs. cost.
- 5 Financing (location, ease of conversion, etc.)

WORK FLOW MEASUREMENT

FIGURE 2

- 1 Identify all such flows.
- 2 Determine their points of departure and arrival.
- 3 Count the items.
- 4 Count the batches.
- 5 Weigh the batches where significant.
- 6 Identify and measure all types of containers used.
- 7 Make intensively statistical studies which permit us to apply logic to layout and conveyor problems.

needs as well as to the automatic conveyor needs we anticipated. We manufacture "paperwork" and our production must be geared in much the same way as in modern light industry. The committee established the following pattern for examining our procedures (see Figure 2). Next, we had to face the second of the two chief lines of research—future space requirements. Connecticut General used a very careful and exacting method to answer this question. We established two separate units, one to estimate future requirements by interviewing all department heads and executives. The other examined income, assets, sales, personnel, and other vital records and made statistical projections of future requirements. Of course, in the interviewing, the questions were all predetermined. We considered such matters as units of work produced, future policy changes and other factors which might increase or reduce space and layout re-

quirements of the plant.

QUESTION: For how many years in advance should one plan a building?

ANSWER: I can't answer how many years any given company should plan ahead. It's a variable from industry to industry. It's dependent on the advances of science and technology, and the attitudes of separate managements. We made our first estimate for five years from the date of our research, and another for 10 years after that, giving us a 15 year building program.

QUESTION: You said you established 2 groups to do the space study. How did your two individual studies of space requirements compare?

ANSWER: Surprisingly well. The two estimates were only 2 percent apart on personnel and 10 percent on space! On a 15 year estimate, the compatibility of results was amazingly gratifying. We even found explanation for the 10 percent discrepancy on space estimates. The group which gathered its facts from department heads was informed of expansion plans and used this information in its presentation. The group working with past performance records had no access to this information and consequently could not include it.

QUESTION: How did you actually relate this statistical material to future requirements?

ANSWER: We incorporated this data into our report to our architect with other statistics as to our desired space allocations for all classifications of employees, charts on the desired proximity of departments, requirements for maintenance, and special area needs.

QUESTION: Is it practicable for a company to give such detailed orders to an architect? Is it possible for him to conform exactly to a set of rules as rigid as these appear to be?

ANSWER: The answer to the first part of this question is "yes"—to the second part, "probably not." We didn't intend these instructions as "rules," but rather as guideposts. It is almost impossible to transform abstract ideas into a physical model which accommodates each one. These guideposts left no doubt of our objectives in the mind of the architect, our main concern. m/m

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planning idea

Warehouse boosts efficiency with "automated conveyors"

Unified storage center replaces six separate operations

The development of a system of automatic conveyors and palletizing machines for a new warehouse at the Pittsburgh plant of E. J. Heinz Company has mechanized all warehousing operations. The advantages offered by automatic handling equipment were major factors in planning the new warehouse, and consolidating widely scattered and expensive shipping operations in the plant.

Operation of the system is similar in some respects to switch tower control of railroad trains. In fact, the operation involves a switch control center where "trains" of predetermined and widely variable numbers of filled cases are made up and routed. The cases travel on twelve accumulator conveyors and five trunk conveyors, through four pallet loading machines, and over subsequent conveyors and various vertical lifts to the warehouse.

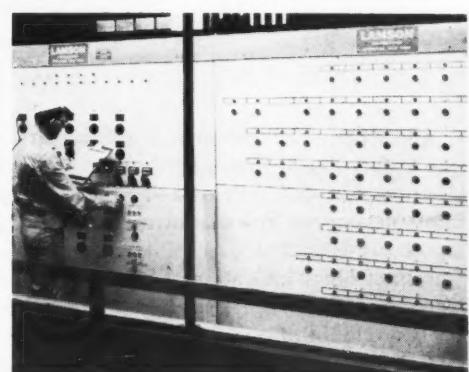
The number of cases in each "train" is determined by size, and the number required to fill a pallet. The average distance traveled on the conveyors is more than 1100 feet, through various passageways between buildings. There

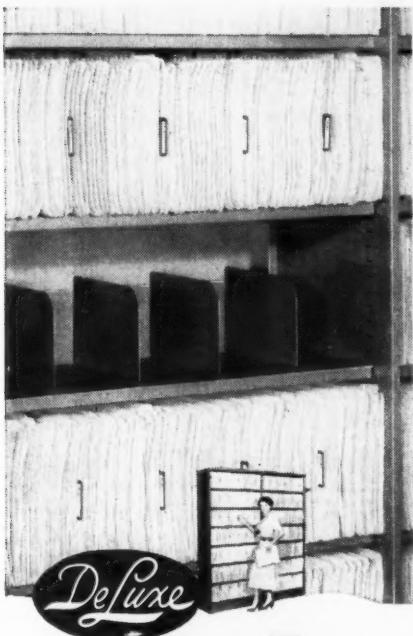
are approximately 1½ miles of automatic conveyor lines.

The switch control center for the accumulator conveyors is located near their junctions with trunk conveyors. Panel controls include electrical plug-in cable connections for each trunk conveyor, with selected accumulator conveyors. It also has multiple contact dial switches to determine the number of cases to be switched from accumulator to trunk conveyor. Another feature is indicator lamps that show operating conditions on the whole conveyor system. A three-station intercommunication system, with loudspeakers, connects the control stations, operator's pulpit in the warehouse, and the foreman of operations.

The new system has facilitated a move to one central warehouse from storage facilities that had included six buildings in different locations in Pittsburgh. A total of 40,000 pallet loads of products can be stored in the three-floor building. The conveyors permit the handling of as many as 48,000 cases from production lines during an eight-hour shift. m/m

LEFT: The operator in the control pulpit selects the proper pallet loading pattern by pushing a button; BELOW: The switch control center includes electrical plug-in cable connections for each trunk with selected accumulator conveyors. Indicator lamps also show operating conditions of the system.





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FEBRUARY 1956

planning idea

New applications of ultrasonic cleaners

The application of ultrasonic cleaners at Trans World Airlines, Inc., to clean armatures is evidence of their expanding use in industry. The high-frequency sound units operate on the principle of cavitation. Here, ultrasonic energy "cold boils" the cleaning fluid—literally blasting loose minute foreign particles from high-precision parts.

The equipment features improved low-cost cleaning effectiveness with inexpensive water-detergent solutions, elimination of flammability and toxicity factors, elimination of the problem of waste fluid disposal, adaptation to either batch or process cleaning rates, and application to cleaning operations formerly believed impossible.

In addition, intricate instrument mechanisms can be cleaned without disassembling them, which reduces maintenance time by more than 60%.

It is estimated the cleaners will effect savings of about \$14,000 for TWA during the first year of utilizing the new maintenance equipment.

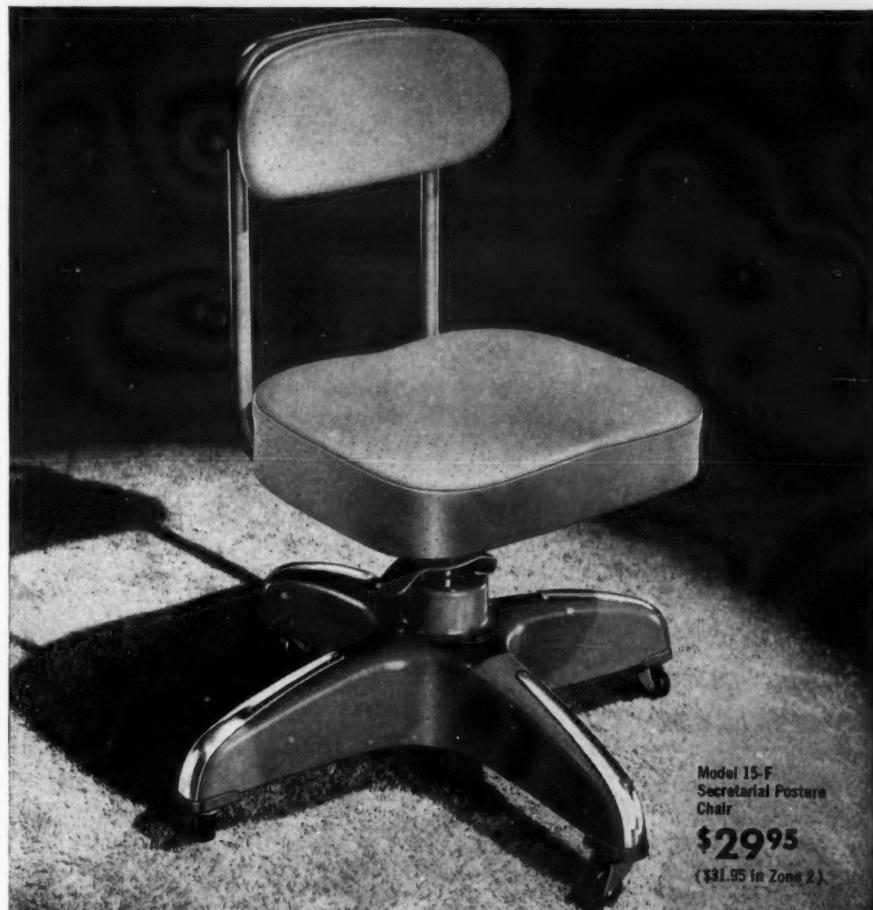
The units have achieved "a maximum of 100% cleaning effectiveness" with the inexpensive water-detergent solutions, compared to 40 to 70% effectiveness with more expensive solvents. Direct labor costs have been reduced as much as 75%, and in many cases, cut solvent costs as much as 98%.

Basically, a unit consists of two parts: a cabinet which houses a generator of high-power electrical energy, and transducer or cleaning unit, which holds the cleaning solution and converts electrical energy into high-frequency sound.

It operates by transmitting specially selected low high frequency sound waves through the water-detergent solution to achieve a unique high penetration of ultra-sonic energy on the part to be cleaned. The cleaning solution literally wraps itself around the part—penetrating areas which resist all other methods of industrial cleaning, such as hand brushing, vapor degrease, and agitation and pressure wash.

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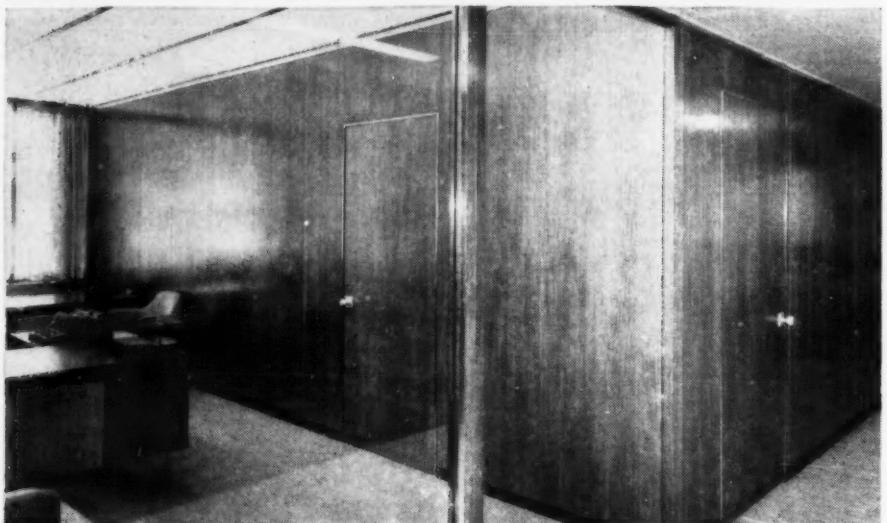
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(Circle 125 for more information)

(Zone 2—Texas and 11 Western States)
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OVER 6 MILES of Weldwood Korina® Movable Partitions are planned for Ford's efficient new administration building. This full-scale model shows part of the installation designed by architects Skidmore, Owings and Merrill, to be made by Detroit Partition Company.



WELDWOOD "STAY-STRATE"® DOORS with the *Life of the Installation* guarantee are used with these partitions. Doors match birch, Korina and walnut partitions in regular stock. Both blend harmoniously into any decorative scheme, as in Ford's contemporary setting shown above.

Weldwood Movable Partitions to be used in new Ford Central Staff Office Building

Here's why Ford's new Central Staff Office Building will use the *only* flush partitions that combine the beauty of real wood with low-cost movability.

1. **THE BEAUTY OF FINE HARDWOOD PANELING** adds warmth and dignity that are important to employee morale, and complements any decorating scheme.

2. **NEW OFFICES OVERNIGHT.** Weldwood's unique metal key construction locks panels together firmly, yet allows quick rearrangement by regular maintenance crew.

3. **NO PAINTING—NO REDECORATING!**

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4. **FIRE-RESISTANT WELDROK® panel core** also cuts sound—it's much more effective than a 2 x 4 stud partition with metal lath and plaster on both sides.

LIKE TO KNOW MORE? Ask your architect (he'll find all specifications in Sweet's Files) or write for descriptive brochure and name of nearest distributor to United States Plywood Corp., Dept. MM 2-56, 55 West 44th Street, New York 36, N. Y.

Weldwood® MOVABLE PARTITIONS

A product of

UNITED STATES PLYWOOD CORPORATION
Weldwood—The Best Known Name in Plywood
(Circle 149 for more information)

Parking roof utilized for drive-in banking service

By using the roof of its new building, the State Bank and Trust Company of Wellston, Missouri, found it was able to offer its customers "banking in the sky" drive-in teller service and roof parking. When they decided to incorporate a "drive-in" operation, the bank found itself in a position unfavorable for routine designs of this type. The building faces a major traffic artery, and the street behind it is 14 feet higher than the main street. A drive-in arrangement would have been hazardous, because of the heavy pedestrian and vehicular traffic. The roof parking area solved the problem.

Customers simply drive through a gate, over an asphalt-topped lot, onto the concrete bank roof. Here, they can use one of the two "Snorkel" tellers without leaving their cars, or park their cars and enter the bank by means of either an elevator or a staircase.

The roof lot will hold 12 or 14 cars, plus those utilizing the teller system. A special cellular glass insulation was applied over the asphalt roof. This insulation has a compressive strength of over 7 tons per square foot, enabling a concrete surface to be poured over it.

Customers driving on to the roof from the rear may park in front of the large periscope device which uses microphones and mirrors to enable the teller to maintain constant visual and audio contact with the customers. An electric dumbwaiter carries cash and withdrawal and deposit slips.

The new design furthers one of the principal objectives of the bank—that of encouraging individual depositors to use bank facilities by enabling them to transact business with a minimum of inconvenience and delay.

For data on insulation blocks, circle number 233 on the Reader Service Card.

Glass insulation blocks laid over asphalt roof permits concrete to be poured as surfacing.

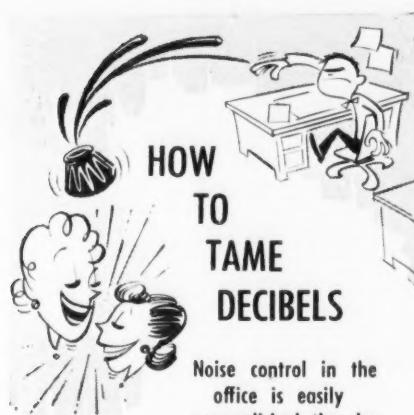


Moving shades protect building from sun's rays

Jalousies of iridescent aluminum finish, moving automatically with the course of the sun, protect the Garrett Corporation's new building in Los Angeles from intense heat and sun glare. The louvres also act as shades and light reflectors for an effective dis-

tribution of light within the building.

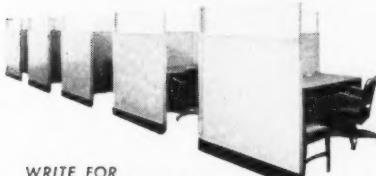
The full bank of jalousies measures approximately 87 feet in length and 16½ feet in height, and covers the entire south side of the building. It is divided into three segments, with an individual motor unit and automatic



Noise control in the office is easily accomplished the day you install

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FEBRUARY 1956



control for each segment.

Two time clock interval timers and a duration timer make up the control system. The first timer controls the number of movements of the vanes, and the times at which they start. The duration timer determines the length of time of each movement. The remaining timer reverses the position of the vanes at 12:45 p.m. The controls maintain the position of the vanes at approximately a 90-degree angle to the rays of the sun.

According to the architects, Welton Becket and Associates, the periodic movement of the vanes and resultant change in the shadow patterns will give life and movement to the building's exterior.

Desk wastebasket saves space and hides contents

A new wastebasket-in-a-desk idea greatly improves the appearance of the offices of State Farm Mutual Automobile Insurance Co. in Bloomington, Illinois. The company revised its standard desks to receive special oversize, elongated vulcanized fibre wastebaskets, housed in the recessed backs of the desks specially designed.

The company's efficiency expert contended that the style of wastebaskets in use in the company's offices presented more liabilities than assets. The old baskets, with their exposed contents,



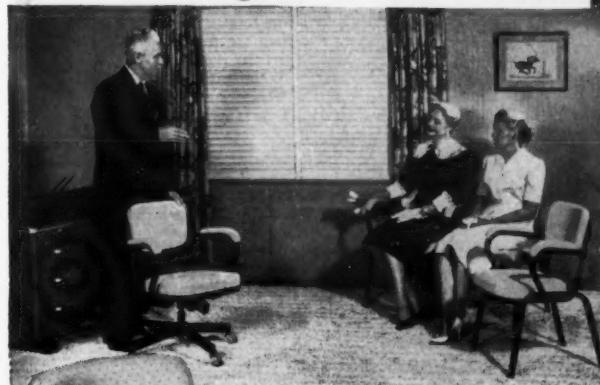
were unsightly. They obstructed aisles, and presented a physical hazard to "shins" and hosiery. They contributed to littered floors and, in addition, occupied valuable floor space. From a maintenance point-of-view, they slowed down janitorial crews.

The wastebasket-desk combination saves valuable floor space and keeps aisles clear. Floors are no longer littered

with wastepaper because the baffle-board insert on the top of the desk makes it easier to direct papers into the basket. This arrangement also saves employee time and effort, since it is no longer necessary for a worker to turn or walk to a basket to dispose of litter.

For more information, circle number 246 on the Reader Service Card.

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(Circle 181 for more information)

where they w

THE OFFICES O

SU



THE MAN

James Crane Kellogg III
Vice Chairman,

THE COMPANY

New York Stock Exchange
Senior Partner,
Spear, Leeds & Kellogg

THE DESIGNER

Desks, Inc.



SPACIOUSNESS AND SERENITY were two important requests which Mr. Kellogg made to Desks, Inc. when they were planning his office. The nature of his work demanded an office with an air of quiet roominess, and a conference table around which his partners could discuss the day's activities at leisure.

Mr. Kellogg has the distinction of being the youngest man to have been made vice chairman of the New York Stock Exchange. He is now senior partner in the largest firm of specialists on Wall Street. Specialists are commonly known as "brokers' brokers"—maintaining a fluid, orderly market by buying when no one else is buying and selling when everyone else is buying. They must keep an eagle eye on every nuance of each market variation, or stand to lose hundreds of thousands of dollars in a single day.

His big, square office has walls, drapes and carpet done in pale green, conducive to much-needed relaxation. The leather upholstery of the chairs and sofa is dark green. The desks, end tables, chairs, and the conference table are Early American Chippendale style in dark mahogany. They are handsomely heavy, but not too massive. An adjoining office has a round mahogany table where luncheon is often served.

As there is very little actual desk work done in this type of business, three other partners share the two desks placed at opposite ends of the room. Mr. Kellogg's desk has been placed in one corner of the room, at the head of the conference table. It is not necessary for him to move when he must preside at the daily group meetings, or the firm's Board of Directors meetings. It is this con-

ey work

ON SUCCESSFUL MEN



ference table which is the heart of the office. The whole atmosphere of the room is one of quiet efficiency where Mr. Kellogg and his partners may carry on their important Wall Street activities, and where he may also work on the many outside interests in which he is involved. m/m



CONFERENCE TEST PROVES...

Du Pont breathable "Fabrilite"** provides more seating comfort



13 of 15 men at four-day meeting specify breathable "Fabrilite" as the more comfortable upholstery

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Test chairs provided for the meeting were identical except for the coverings: half were of breathable "Fabrilite" . . . the rest of a conventional supported vinyl material. The 15 businessmen present were not told which of the differently styled upholstery was breathable. After using both types of chairs equally for four days, 13 of the participants reported that breathable "Fabrilite" undoubtedly had the more comfortable seating surface!



"Fabrilite" breathes—that's what makes possible the superior comfort that so impressed the conference group. As does the cigarette smoke in the picture, air and vapor pass right through the thousands of invisible pores in breathable "Fabrilite" to give the comfortable seating surface of a woven fabric. Yet breathable "Fabrilite" is continuously vinyl-coated and offers all the advantages of a durable plastic—extra-long service life, full soil and wear resistance, complete cleanability with a damp, soapy cloth. It's perfect for furnishings that get heavy use . . . even abuse.

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For more information, write to Emeco Corp., Hanover, Pa.; or circle number 236 on the Reader Service Card.

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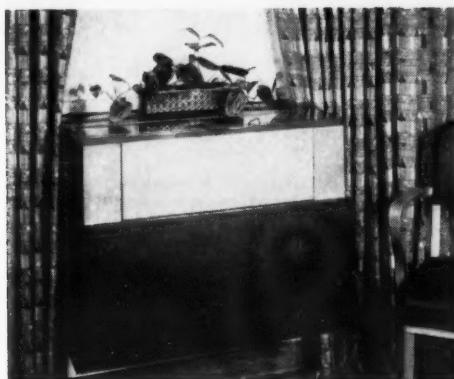
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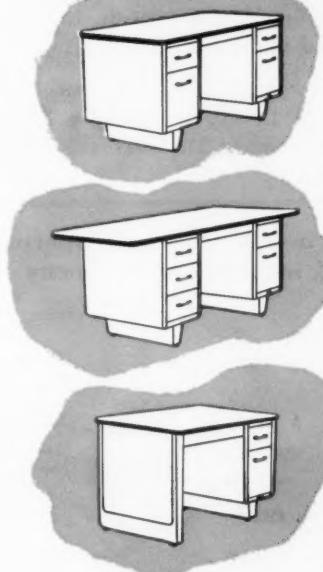
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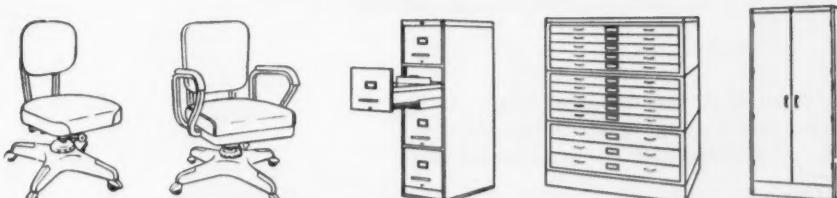
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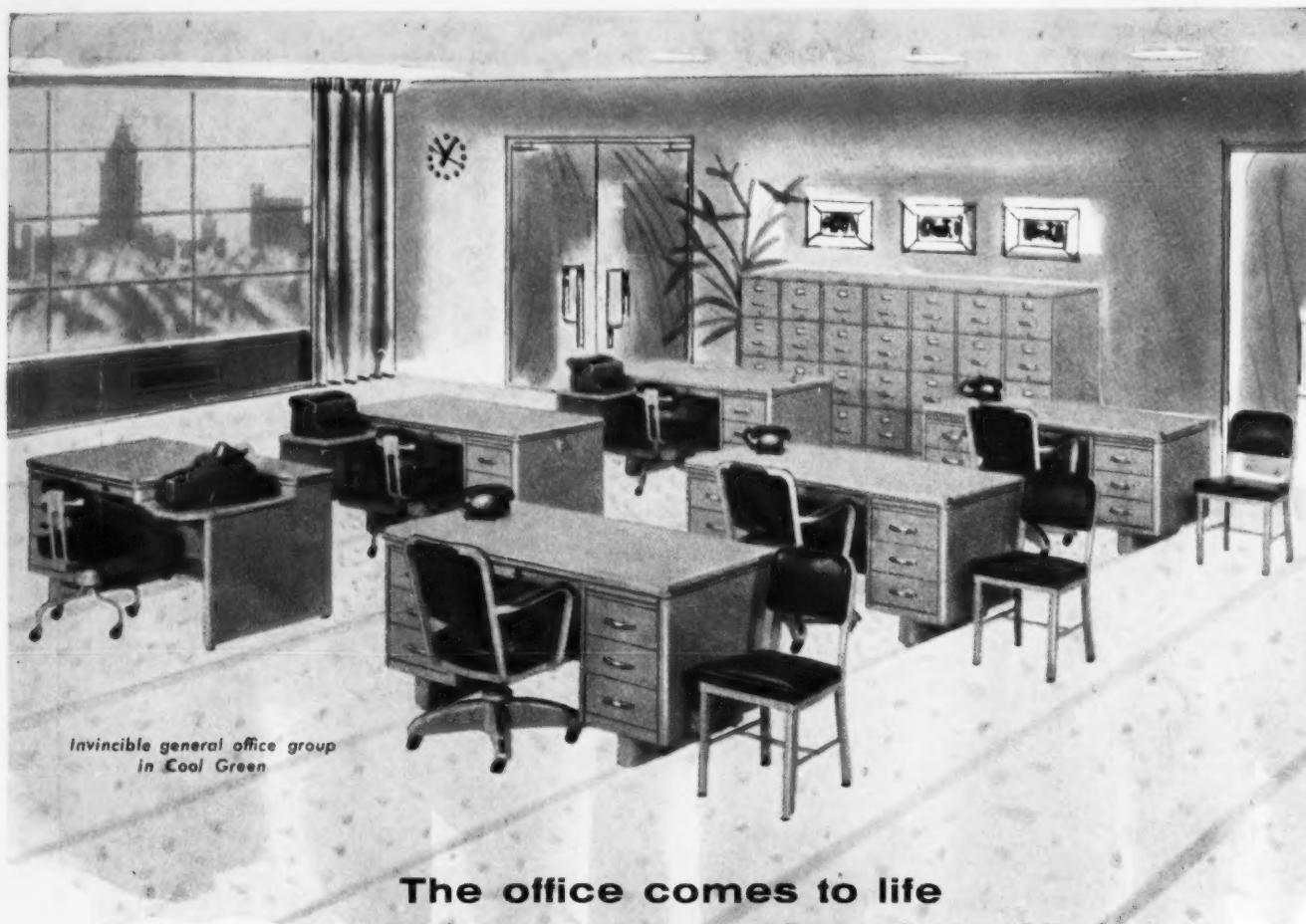
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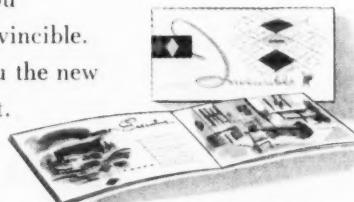


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